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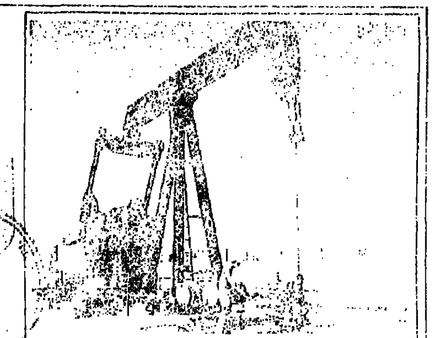

Oil as S'fund Victim? 3

INSIDE CMR

Trade Zone for Mideast Chemicals?

The European Community should start thinking about setting up a free trade zone between the EC and the Arabian Gulf States, Vicomte Etienne Davignon proposed last week in an address at the twentieth annual meeting of the European Petrochemical Association in Monaco.

The former member of the EC Commission, now a director of Societe Generale de Belgique, thinks that this is the proper moment to start negotiations because the flow of imports has begun.

The Common Market now exports about $18 billion a year of assorted goods into the Middle East, while Saudi Arabia alone in 1985 moved some 1 million metric tons of key petrochemicals, mostly low- and high-density polyethylenes and methanol, into the European market.

What such a political and economic agreement will give the Europeans, Vicomte Davignon pointed out, is a partner in consultation, but no one can guarantee the results.

At a press conference following his formal presentation, he conceded that the Arab countries might be tempted to enlarge their present petrochemical capacities if such a free trade zone were established in the EC.

However, he said that such a pact would establish an organized relationship between the EC and the Gulf States, that the percentage of trade going both ways

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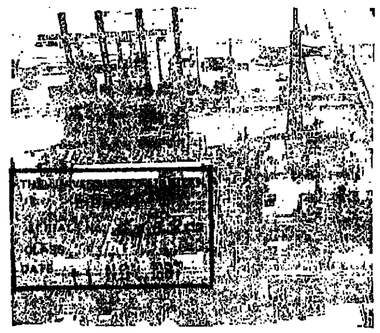

MIDDLE EAST CHEMICALS: Arab countries might be tempted to raise petrochemical capacity if Davignon plan were adopted. Positive result could be stabilization of trading relationships.

BASF Appeal Is Rejected By NLRB in Union Dispute

The corporate campaign being waged against BASF Corporation by the Oil, Chemical & Atomic Workers Union does not constitute an unfair labor practice, the National Labor Relations Board has ruled.

A complaint filed by BASF with the NLRB's regional office in New Orleans, La., was dismissed in August, and the company appealed to the NLRB's general counsel in Washington, D.C.

"We just found that there was not sufficient merit in any of the charges that the company brought," an attorney in the NLRB's office of appeals said last week.

"I'm disappointed the National Labor Relations Board made the decision they made," said Les Story, manager of BASF's Geismar Works, where the company has been in a contract dispute with the union for over two years.

Mr. Story added, however, that the NLRB ruling would not be appealed to a civil court. "We're going to have to live with the corporate campaign," he said.

In its decision, issued September 24, the NLRB stated, "The use of a corporate campaign by a union to assist it in meeting its goals at the bargaining table does not violate" the National Labor Relations Act.

The union initiated the campaign against the company after OCAW workers were locked out of the Geismar plant in June 1984.

In its complaint, BASF charged, among other things, that the union sought to "arouse public animosity, distrust, fear and suspicion of BASF" by assserting that the Geismar plant poses a safety hazard to the community. According to the company, the union also disclosed confidential BASF financial data and attempted to block issuance of needed environmental permits and bond authorizations.

"We reviewed the evidence and decided that just wasn't correct," NLRB regional director Frank Malone said in August, after dismissing the company's charges against the union (CMR 8/11/86, pg. 3).

Mr. Story said last week that the corporate campaign is "still a very serious concern to us," adding that it "takes a certain amount of effort to offset it."

According to Mr. Story, BASF's chief negotiator at Geismar, the company last met with union representatives on September 26 for approximately 4 hours. He said discussions centered mostly on a review of each side's position. "We were not able to make any progress," he said.

The company's "bottom line" offer provides for an 8 percent wage increase over the life of a 38-month contract. Each worker would receive a "sign-up bonus" of up to $750, with salary increases in the second and third years of the contract.

The union has offered to take a $2-per-hour pay cut, but opposes a company effort to replace 110 union mechanics with outside contract workers. Mechanics account for about 30 percent of all OCAW workers at the Geismar plant.

Mr. Story said the company would save more by using contract mechanics than it would by accepting the $2 per hour pay cut. Other issues in the dispute include healthcare benefits and seniority.

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Superfund Tax Passes But Bill May Be Vetoed

After endorsing the final $8.5 billion superfund financing package agreed to Thursday by congressional negotiators, the chemical industry called on lawmakers to quickly approve the plan and urged President Reagan to sign the landmark legislation into law.

The tax package is intended to pay for a five-fold increase for superfund, which was budgeted at $1.6 billion in its first five-years and managed to complete work at only about two dozen abandoned toxic waste dumps.

The five-year reauthorization plan would finance the cleanup program with a $1.4 billion tax on chemical feedstocks, a $2.75 billion tax on the production of crude oil, $2.5 billion from a new broad-based corporate tax, $1.25 billion from general taxpayer revenues, $300 million from interest on trust fund monies, and another $300 million from cost recoveries from private responsible parties.

A new $500 million program to clean up leaking underground storage tanks will be paid for by a one-cent per gallon motor fuel tax imposed at the pump.

The agreement is expected to win overwhelming approval in the full House and Senate this week before going to the White House where the measure faces a veto threat because of the Administration's opposition to some elements of the financing package, including the broad-based tax on manufacturers.

"On balance, the tax conferees have developed an acceptable compromise that will allow Environmental Protection Agency to resume full-scale cleanup activities," says a spokesman for Chemical Manufacturers Association.

He says the industry is pleased the conferees "recognized the decidedly anti-competitive effects" of feedstock taxes and agreed to essentially freeze the tax on building block chemicals at $1.4 billion over the next five years.

Petrochemical companies have contributed $1.2 billion to the original $1.6 billion program since 1980. Conference sources say the petrochemical industry persuasively argued that higher superfund taxes would make it uncompetitive with foreign manufacturers.

At the urging of the industry's supporters in the Senate, the House agreed to accept a $2.5 billion broad-based tax on manufacturers with earnings of more than $2 million per year. A superfund tax of $25 per $10,000 would be imposed on a corporate taxpayer's "alternative minimum taxable income" as computed under the tax reform bill.

Rep. Thomas Downey (D-N.Y.) sponsor of the House-passed tax package called the alternative minimum tax an "important substantial change" in the Senate position because it is a levy on corporate profits. The Senate-passed bill contained a manufacturers' excise tax that opponents labeled a "value-added tax."

In return for the broad-based tax, Senate

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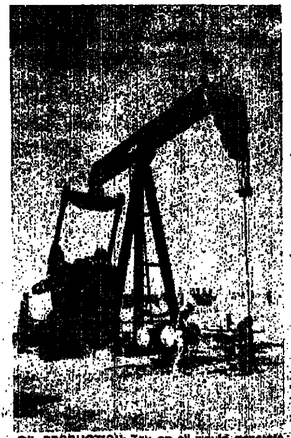


OIL PRODUCTION: Tax on oil would generate much new revenue for expanded superfund tax.

Carbide Plans to Shed Electronic Components Unit

Union Carbide Corporation is putting more of itself up for sale, this time its electronic components business, which manufactures and markets high quality tantalum, ceramic and film capacitors under the "Kemet" trademark to the electronics industry.

Carbide says it will evaluate bids from all potential buyers, and expects to complete the sale of the business within the next six months.

Garo Armen, senior chemical analyst at Dean Witter Reynolds Inc., says the business doesn't fit strategically with Carbide's core activities, and contributes little if anything to the company's operating earnings.

Mr. Armen says the business will most likely be sold to a fully integrated electronic components manufacturer, and should fetch $200 million or more.

The electronic components business has been generating annual sales of around $125 million for the past few years, according to analysts' estimates.

Carbide has been selling low-earning businesses and using the proceeds to retire high-cost debt, and as a result, the company should see a "fairly good swing" in corporate earnings, beginning next year, Mr. Armen says.

Disclosure of Carbide's plans to sell its electronic components business follows closely on the heels of similar announcements concerning its agricultural chemicals and electrical carbon units, and the assets of its Brownsville, Tex., chemical manufacturing facility.

These divestitures, along with others announced earlier, are all part of a massive restructuring designed to give the company a tighter focus and also to relieve it of the huge debt amassed in its effort to thwart the hostile takeover attempt by GAF Corporation.

Last week Carbide and GAF reportedly reached an agreement whereby GAF will not increase its 10.6 percent interest in Carbide for the next 10 years.

At presstime, neither Carbide nor GAF would comment on the report. Under the agreement, Carbide is said to have granted favorable long-term contracts to GAF for chemical raw materials required for its operations.

Toxic Chemical Haulers Must Pass Special Test

Congress approved legislation last week establishing nationwide licensing standards for truck drivers and special requirements for drivers hauling hazardous materials. The bill by Sen. John Danforth (R-Mo.) and Rep. James Howard (D-N.J.) requires the Department of Transportation to issue regulations imposing minimum Federal standards for licensing operators of large commercial vehicles, such as tank trucks, in place of the current system of state-by-state licensing. Under the legislation, states would still issue licenses for truck drivers, but must adopt the Federal standards by 1992 or face losing up to 10 percent of their Federal highway money.

Critics of the current system say it allows truck drivers to obtain more than one license, often as a tactic to hide violations. The American Association of Motor Vehicles estimates as many as 30 percent of the nation's truck drivers have multiple licenses.

In addition to the minimum standards for all drivers, those handling hazardous materials would be required to pass a written test demonstrating their knowledge of hazardous materials regulations, properties of hazardous materials and emergency response procedures.

Tank truck operators would also have to take road tests to demonstrate their ability to handle the vehicle and operate safety equipment.

The special requirements would cover both interstate and intrastate transport of significant quantities of hazardous materials, an expansive list of substances defined by DOT.

A study by the Congressional Research Service, citing DOT statistics, indicates that more than 60 percent of truck accidents and spills involve human error on the part of drivers or other workers such as loaders.

Congress is expected to make more comprehensive changes in hazardous material transportation law next year.

Air Products Gets Terpolymer License

Air Products & Chemicals, Inc., and Wacker-Chemie GmbH of West Germany have signed a new technology license for Wacker-Chemie's patented vinyl acetate-vinyl chloride-ethylene terpolymer technology. The technology license will enable Air Products to introduce low-cost cement modifiers offering performance properties comparable to more expensive acrylic latex systmes.

The primary appliications for the new products will be in construction as a binder for exterior insulation and finish systems (EIFS) and other textured exterior coatings.

Air Products has begun introduction of new products. Commercial quantities of the products manufactured by Wacker-Chemie are available immediately. In 1987, production will begin at existing Air Products facilities in the United States.

This is the latest technology licensing agreement between Air Products and Wacker. In 1983, Air Products licensed technology for redispersible spray-dry vinyl acetate-ethylene powders which are used in thin-layer portland cement applications including EIFS and stucco coatings. A 15 million-pound-per-year plant to produce these powders is currently under construction at Air Products' Calvert City, Ky. facility.

Amoco Going South With 'Torlon' Plant

Amoco Performance Products, Inc. will move manufacturing operations for its "Torlon" high-performance thermoplastic from Joliet, Ill. to Greenville, S.C., with startup scheduled for mid-1987.

Amoco completed the acquisition of Union Carbide Corporation's engineering polymers and advanced composites businesses, including the Greenville composites operation and a Marietta, Ohio engineering polymers plant, in June of this year.

"Torlon" has been manufactured at Joliet and the finished resin shipped directly to customers or further processed at the company's fabrication facilities in Atlanta, Ga.

A spokesman says the consolidation was "just a matter of time" and adds that "products and processes at Greenville are compatible with the 'Torlon' process."

ICI Is Expanding Polyether Sulfone

ICI Americas, Inc.'s advanced materials subsidiary will build a new 11-million-pound-per-year "Victrex" polyether sulfone plant at Fayetteville, N.C.

The development follows closely ICI's decision to build a world-scale polyketones plant in the UK and comes soon after doubling PES capacity there in early 1985.

ICI says the decision to build at its existing polyester resin site in Fayetteville is recognition of the US as the largest single market for high-performance engineering thermoplastics.

The company estimates the world market for these high-temperature resins is currently about 36 million pounds per year and is expected to nearly double by 1990.

Construction on the plant will begin immediately and when completed in mid-1988, will make the advanced material unit one of the world's largest producers of high-performance aromatic thermoplastics, and the only producer with manufacturing plants in the US and Europe.

Akzo, Kollmargen Set Electronics Venture

Kollmorgen Corporation, a Stamford, Conn. electronics and instruments maker, and Akzo N.V. last week reported that they have reached an agreement in principle to establish a partnership to manufacture and sell materials for the worldwide electronics market.

Akzo would own 65 percent of the venture and Kollmorgen 35 percent, according to the companies. The partners would transfer several of their current developing materials technologies to the joint venture, including Akzo's proprietary high-temperature polyimide flexibelmetal-clad substrates and Kollmorgen's gallium arsenide wafer material and processing material technologies.

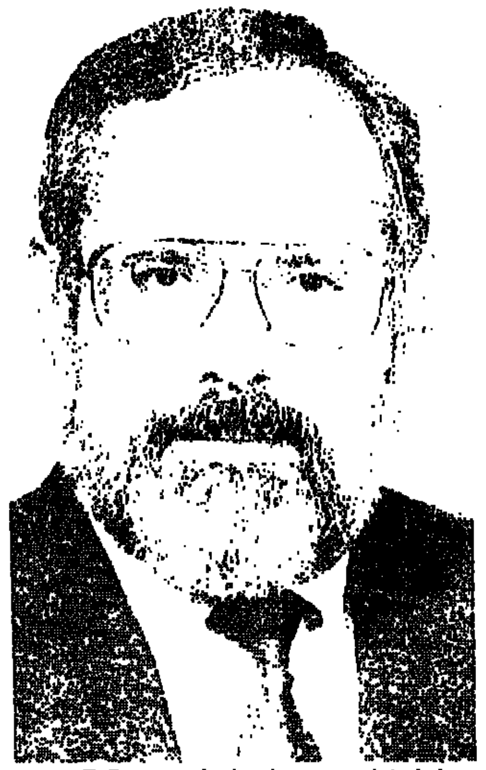
In connection with the electronic materials venture, Akzo and Kollmorgen will also establish a partnership in the field of electronic interconnections. Kollmorgen would transfer the businesses of its multiwire, PCK technology and additive products divisions and related industrial property rights as its contribution to the partnership, while Akzo would make a cash investment. Kollmorgen would own 65 percent of this joint venture, and Akzo 35 percent.

Biotech Agreement For Du Pont Ag Unit

E. I. du Pont de Nemours & Co. says it has entered into a multi-million dollar, multi-year research agreement with Advanced Genetic Sciences Inc., an Oakland, Calif., biotechnology firm.

The research contract, aimed at developing new commercial biotechnology products, reflects the diversification strategy of Du Pont's agricultural division.

The company already has a plant biotechnology research program and intends to enter several markets in that field. The research agreement with Advanced Genetic "will not only enhance Du Pont's research efforts, but will also help to more rapidly and effectively achieve our goal of commercializing the fruits of this research," says agricultural group vice-president Dale E. Wolfe.



James E. Depew, who has been appointed vice-president of purchasing for Glidden Company. Mr. Depew will be responsible for the acquisition of all chemicals, solvents, titanium dioxide and supporting raw materials. He has been with Glidden since 1972.

Du Pont Slates Plant For Japanese Group

E.I. du Pont de Nemours & Co. says it will construct a plant to produce "Krytox" vacuum pump fluids and fluorinated lubricants in Utsunomiya, Japan.

Du Pont Japan Ltd. will begin construction in October, with completion scheduled for the first quarter of 1987. The plant, Du Pont says, will support a 20 percent annual increase in demand for the fluids in Japanese and other Asian and Pacific markets.

According to the company, the fluids have achieved good acceptance in the semiconductor industry. Right now they are produced at the company's Deepwater, N.J., Chambers Works. In addition to the fluids, the new Japanese plant in Japan will produce a line of compatible greases and lubricating oils.

Molycorp Yttrium On Stream in Canada

A plant that recovers yttrium concentrate from a Canadian uranium mine is supplying feedstock to Molycorp, Inc., the leading yttrium refiner in the US.

The plant, which began service in September, was built by an international joint venture that involves Molycorp. The site is a uranium processing complex operated by Denison Mines Ltd., a partner in the joint venture.

Yttrium is used in color televisions, fluorescent lighting, microwave communications and jet engine metal alloys.

Other participants in the joint venture are Unocal Canada Limited and SM Yttrium Canada Ltd. Unocal Canada Limited and Molycorp are subsidiaries of Unocal. SM Yttrium Canada Ltd. is a company formed by Shin-Etsu Chemical Co. and Mitsui and Co. both of Japan.

Holtrachem Sets Up West Coast Branch

Holtrachem West, Inc., a subsidiary of HoltraChem, Inc., Natick, MA, has been established at Anaheim, Cal. Lance Renfrow has been appointed vice-president and general manager. Privately-held HoltraChem with claimed annual sales of $33 million, says it is the largest distributor in the United States of Liquid caustic soda via six East Coast terminals; titanium dioxide anatase slurry, acetic acid, liquid caustic potash, and hydrogen peroxide for the textile industry. HoltraChem West, Inc. will pursue the parent company's policy of distributing primarily Liquid Chemicals utilizing its own fleet of tanktrucks and railcars.

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Fred W. Montari, who has been appointed president and chief operating officer of NL Chemicals. Mr. Montari had been the president and chief operating officer of the petroleum services branch of NL Industries.

Himont to Build A German Plant Plans Asset Sale

Himont Inc., the polypropylene joint venture of Hercules Incorporated and Montedison SpA of Italy, plans to build a new multiline composite and alloy products plant in West Germany.

The facility will supply the growing demands for specialized thermoplastic materials in Central and Northern Europe, Himont says.

Himont will also build a technical center at the German site, which will provide technical service for all Himont products.

In another development, Himont has agreed to sell its Beringen, Belgium, plant to Neste Oy of Finland. The plant produces 120,000 metric tons a year of a variety of polypropylene products.

Neste has also signed a license agreement for Himont's "Spheripol" process.

Proceeds from the sale will be used to strengthen Himont's position in polypropylene and allied products in Central and Northern Europe and the world marketplace.

Upjohn Dropping Supplement Bid On Depo-Provera

Upjohn Company last week withdrew its supplemental New Drug Application for "Depo-Provera" as a contraceptive. In a related move, the company has also withdrawn its appeal of a recommendation by a public board of inquiry that the drug should not be approved for contraception. The company said it acted in order to develop "significant new information" concerning the product.

"Depo-Provera" is approved in the US for treatment of endometrial and renal cancer. It is approved for use as a contraceptive in more than 80 countries, according to the company.

Upjohn cited recent studies by the World Health Organization and a committee on reproductive physiology appointed by the Canadian Health Protection branch, a post-marketing survey of the drug in the UK and another Canadian study, all of which allegedly refute an association between the use of the drug and breast cancer.

The company also said it is necessary to reassess contraceptive benefit-risk factors in the US in light of the withdrawal of intrauterine devices from the market.

Drug Patent Problem Improves in Korea Worsens in Taiwan

While the situation for the US pharmaceutical industgry in South Korea is looking better, the situation in Taiwan shows little sign of improvement because of that nation's refusal to put "teeth" into its patent law, a drug industry executive told Congress last week.

Jay J. Kingham, senior vice-president, Pharmaceutical Manufacturers Association, told a Senate Foreign Relations subcommittee, "These two countries provide an interesting study in contrasts in the area of intellectual property protection — South Korea is planning to take positive steps to protect intellectual property whereas Taiwan is planning to take measures which would likely be of marginal value to the pharmaceutical industry."

In July, the White House settled a trade dispute over intellectual property protection with the government of South Korea. Under the agreement, South Korea is committed to introduce a bill by mid-1987 to amend its patent law to provide patent protection for pharmaceuticals.

The Seoul government also agreed to establish a patent term of 15 years from the date of publication of the patent application.

The bill, when enacted next year, will also provide retroactive patent protection for products which had been patented but not yet marketed in the US or South Korea prior to the enactment of the bill.

South Korea's pharmaceutical market in 1985 measured about US $1.1 billion, with American firms holding an 11 percent share worth $121 million.

"PMA conservatively estimates that inadequate intellectual property protection in South Korea currently costs the US industry $70 million in lost sales annually," Mr. Kingham says.

"We hope the agreement with South Korea, assuming it is enacted as expected, will correct this problem and also lead to similar agreements with other countries lacking effective intellectual property protection," he adds.

The Taiwanese government has been working on a draft amendment to its patent law, but Mr. Kingham says the US industry believes it will not afford sufficient protection.

He says that the draft proposal contains an open-ended compulsory licensing requirement, unenforceable protection for existing process patents in Taiwan, and lacks retroactive protection for pharmaceutical products.

Merck, ICI in Pact

Merck & Co., Inc. and Imperial Chemical Industries, PLC, last week said they completed worldwide licensing agreements covering two prescription pharmaceutical products now being developed by their research laboratories.

Lisinopril, a new ACE (angiotensin converting enzyme) inhibitor being developed for the treatment of hypertension and congestive heart failure, will be licensed by Merck to ICI.

'Statil' (ICI 128,436), an aldose reductase inhibitor being developed for the treatment of complications of diabetes, will be licensed by ICI to companies of the Merck group.

The arrangement provides for close cooperation in the development of the products, but for completely independent manufaturing and marketing.

Both products will be marketed separately by both companies under separate trademarks. In certain countries the agreements include parties with whom the companies have existing arrangements.

Additional details of the agreements have not been disclosed.

Merck, the Rahway, N.J.-based international health products company, has an active research program in the field of ACE inhibition, which controls blood pressure by interrupting the renin-angiotensin system with a targeted enzyme inhibitor.

Hercules Nonwoven Fibers Expand in Canada and in Georgia

Hercules Incorporated plans to build a 20-million-pound-per-year fine-denier polypropylene staple fiber plant in the St. Jean/Iberville region for the growing Canadian thermobonded nonwoven fibers market.

The company also announced two significant capital projects at its Oxford, Ga., fibers plant. The production capacity for polypropylene staple fiber will be increased by 16 million pounds per year. Existing fiber production capability will be upgraded and expanded to produce thermobondable staple fiber. The plant's polypropylene fiber development facilities will also be expanded.

Construction of the Canadian fiber plant should take 12 months, with startup in late 1987.

Completion of the production expansion project at Oxford is scheduled for February 1987. The $13 million upgrading of the development facilities is planned for completion by December 1987. This facility will include a prototype production line for polypropylene fiber tow for cigarette filters and a separate developmental line for fiber process studies aimed at new products for the nonwoven fibers market.

According to James E. Knox, president of Hercules Engineered and Fabricated Products Company, "These three projects indicate the magnitude of our commitment to the nonwoven fibers market. Construction of the Canadian fiber plant is part of our worldwide growth areas. The availability of fine-denier polypropylene fiber will support the efforts of Canadian manufacturers to develop new nonwoven applications and product lines."

"At Oxford, he says, this latest expansion project will allow us to continue to meet customer demand for our thermobondable fiber until our recently announced 20-million-pound-per-year staple fiber expansion project, also at Oxford, comes onstream in June of next year. When both of these Oxford projects and the Canadian plant are completed, Hercules' North American staple fiber capacity will exceed 200 million pounds per year, more than double the capacity of 100 million pounds per year as recently as 1982."

"Of particular importance is the prototype production line for tow fiber, which will allow us to produce the uniformity of product quality and volume required for the commercial introduction of this new cigarette filter product, which has a worldwide market potential of 1 billion pounds per year," MR. Knox says.

"Opportunities for commercializing this new fiber filtration system are being pursued in the United States and China, as well as in other areas of the world."

The principal markets for polypropylene staple fiber are consumer disposables such as diapers, sanitary napkins, and fabric softerners; medical disposables such as surgical dressings and gowns and masks; and industrial disposables such as filters, geotextiles, and protective workgear.

Biotech Plans Under Fire At the Capital

Five House subcommittee chairmen have filed comments criticizing aspects of the Reagan Administration's plans to regulate the biotechnology industry.

The Democratic congressmen, Reps. Harold Volkmer (Mo.), James Scheuer (N.Y.), George Brown (Calif.), Berkley Bedell (Iowa), and Leon Panetta (Calif.), filed their remarks in response to the White House's proposed coordinated framework for regulating the release of genetically-altered organisms into the environment, published in June.

In a letter to the administration's biotechnology science coordinating committee, the lawmakers said their comments were intended to "promote the type of cautious progress necessary to bolster public confidence in biotechnology, yet not impede research or the commercialization of the first generation of biotechnology products."

Charging that the framework "replaces a nebulous system of regulatory jurdisction with a tangled one," the congressmen called on the Federal regulatory agencies to clarify ambiguities and to finish work on defining key terms — such as what constitutes a release into the environment.

In particular, the comments were critical of the administration's decision to exclude certain types of genetically-engineered organisms from a full review before permitting them to be released into the environment.

"The wisdom of this position is questionable since it is impossible to predict a priori that a particular genetic alternation will present more of an environmental risk than another," the congressmen stated.

The comments also recommended new legislation to give Environmental Protection Agency and Department of Agriculture the authority to require permits for environmental releases of certain "high-risk" forms of genetically-engineered organisms.

AIDS Drug Test Okayed by FDA In Short Order

Food and Drug Administration last week approved a large-scale test of the first drug that appears to prolong life and reduce symptoms in some patients with AIDS.

FDA said it approved an application to classify AZT, or azidothymidine, as a "treatment" investigational new drug to make it more widely available to thousands stricken by the fatal disease.

Burroughs Wellcome Company asked the government for permission to broaden the use of its drug after ending controlled trials of AZT early because it seemed to provide surprising benefits to some patients.

While not a cure, researchers said it did help relieve the symptoms of some AIDS patients and seemed to improve life expectancy. However, they added that long-term effects of using the drug and any extended benefits remain unknown.

The company said in a statement that AIDS patients eligible for the new treatment IND program would be those who have recovered from one or more episodes of a rare form of pneumonia, pneumocystis carinii.

This form of pneumonia is an "opportunistic infection" that often occurs in AIDS patients whose protective immune systems are weakened, leaving them vulnerable to numerous diseases and infections. The pneumonia was the subject of the recently suspended trial.

Burroughs Wellcome said it would make AZT available free of charge until it received FDA approval as a prescription drug, which could occur by early next year.

Experts estimate that up to 80 percent of the 12,000 living AIDS patients in the US might qualify for the treatment.

Bristol-Myers Gets OK

Bristol-Myers Company received regulatory clearance last week to market its new anti-anxiety drug in the US. The company expects to introduce the product nationwide in early December.

"BuSpar" (buspirone hydrochloride) is a chemically unique compound, according to Bristol-Myers, and is not related to the benzodiazepine family of drugs, including "Valium," the tranquilizer sold by Hoffmann-La Roche Inc.

"BuSpar" is said to be less sedating than other anxiolytics and does not exacerbate the effects of alcohol.

"Unlike the benzodiazepines," Bristol-Myers says, " 'BuSpar' does not cause the euphoric or sedative effects which can often lead to abuse, and clinical studies concluded that 'BuSpar' is unlikely to be utilized by illicit drug users."

The company says the drug caused slight dizziness and minor stomach aches in a small percentage of patients who were given the drug in clinical trials, beginning in 1978.

David Saks, drug analyst and senior vice-president at Morgan, Olmstead, Kennedy & Gardner, thinks "BuSpar" could be the "biggest brand of all time" for Bristol-Myers.

He expects the drug to generate US annual sales of $250 million or more within five years of introduction. Roche's "Valium," now off patent, currently generates annual sales of just under $300 million, down from a peak of around $450 million annually.

The new drug, which will be sold on a prescription basis, was developed by Mead Johnson & Co., a subsidiary of Bristol-Myers. A new drug application (NDA) was submitted to Food & Administration in 1982. The drug has also received regulatory approval abroad, and is already on the market in West Germany.

Bristol-Myers says the drug's market will not overlap with the company's antidepressant agent, "Desyrel."

Allied Fibers Launching New Nylon Carpet System

Allied Fibers Division of Allied-Signal, Inc. is launching a new stain-resistant nylon carpet system for the residential market which the company expects will make up 25 percent of its product mix in 1987 and 50 percent of tonnage in three years time.

Called "Anso V Worry-Free" carpet, the product combines anti-soil and antistatic properties of Allied's fourth generation product introduced in 1980, with a new stain-blocking technology.

Although details of the patent-pending technology are lacking, Monte Rowe, director, home furnishings technical for Allied Fibers, says the new material goes significantly beyond the protection level of the earlier product.

Permanent staining occurs when liquids remain on the carpet surface long enough to be absorbed into the fiber where they are difficult to remove, he says. According to Mr. Rowe, the new system "places a molecular barrier at the fiber surface which greatly impedes the passage of colored molecules to the fiber." This allows the consumer considerable time to discover and react to a spilled material before a permanent stain can occur, he adds.

The material is reported effective against common household stains like red wine, artificially flavored drinks, chocolate, and jellies as well as oil, grease and lipstick, even after they have been allowed to sit 24 hours or longer.

"There are some substances against which no system yet devised can offer full protection—things like black hair dyes, tars and ballpoint pen inks. Strong chemicals found in acne medicines, bleaches and fertilizers do not color spill areas, but create spots by chemically destroying the dyes in the carpet," Mr. Rowe notes. Allied says the new carpet material will be released to the $14 billion retail market in early November and plans call for some 75 fabrics in a wide range of styles and texture to be available by winter.

Allied Fibers vice-president and general manager for home furnishings, Ian Brightman, told trade press reporters at a briefing in New York last week that although "Anso IV" is acting as a carrier for the new product, he sees a significant ongoing market for both products.

Pressure Vessel Threat Studied by US Gov't

On a Monday afternoon in late July 1984, at the Union Oil Company's Chicago refinery about 30 miles southwest of Chicago's Loop, a worker saw a 20-foot-long plume of vapor streaming from the side of a large steel pressure vessel. He thought something was very wrong. He was right.

A few minutes later the tank exploded, and the resulting fire left 17 dead, 17 injured, and $100 million in damages to the refinery.

Why did the tank fail? That was the key question addressed by scientists and engineers from the Commerce Department's National Bureau of Standards (NBS) who were called in by the U.S. Occupational Safety and Health Administration to investigate the disaster.

Their findings should concern the operators of hundreds of similar pieces of equipment all over the United States and the world, because this tank apparently had been built properly, operated properly, and inspected at regular intervals. Nonetheless, it developed severe cracks and failed, with fatal results.

According to Harry McHenry, who led the NBS investigation, "there are hundreds of similar amine stripping facilities in operation all over the industrialized world. And many contain corrosive hydrogen sulfide with the capacity to cause this kind of accident. We want to call attention to the situation because better inspection techniques may be able to prevent a recurrence."

The 16-year-old vessel was more than 60 feet high and 8½ feet across — a cylinder of inch-thick steel plate. It contained two counter-flowing liquids: an aqueous solution of monoethanol amine and the propane-rich process stream. The monoethanol amine solution was used to absorb the hydrogen sulfide that contaminated the process stream. Pressure in the tank was 200 pounds per square inch.

As events were reconstructed later, the vessel's side ruptured, and the vapor and tank contents exploded. The 40-odd feet of the tank, weighing over 20 tons, were propelled by the sudden vaporization of the liquefied gases and took off like a rocket. The top landed more than half a mile away, creating a crater 12 feet deep and 20 feet across and knocking down an electric power transmission tower.

After on-site inspection by NBS researchers, pieces of the destroyed tank were shipped to the bureau's laboratories in Boulder, Colo., for examination. There, exhaustive tests determined the composition and strength of the materials used, the condition

Continued on Page 15

Chemical Pricing: Turn for the Better

Pricing levels for some key chemicals head into the final stretch of 1986 in much better shape than in mid-Summer, thanks to a combination of good demand and the agreement on crude production by members of the Organization of Petroleum Exporting Countries.

For example, in the aromatics market, benzene contract pricing enters the fourth quarter at 85 cents per gallon, having firmed 15 cents per gallon since bottoming out August 1 at 70 cents per gallon.

The turnaround was propelled by the OPEC agreement on production restrictions. As long as OPEC plays a major role in the world oil market, its policies will have a significant impact on benzene pricing.

The spot toluene market rebounded from a low point of 60 cents per gallon at the beginning of August to 74 cents per gallon in mid-September, before falling off the past couple weeks to a current level of 67 cents per gallon.

Strong octane-enhancer demand for toluene, both in the US and in Europe, is seen as a major factor providing upward pressure on basic aromatics pricing, and motorists' movement towards unleaded gasoline should continue to be a driving force in the market in the months to come.

Responding to the higher benzene costs, derivatives pricing has been moving upwards, with a number of changes slated for the turn of the quarter.

Styrene producers raised prices 2 to 3

Continued on Page 36

R.J. Ventres, who has been named chief executive of Borden, Inc. Mr. Ventres joined Borden, Inc. in 1957 as an assistant chief engineer. He has been president of Borden since July, 1985 and will retain that position.

Prescription Drug Code Adopted by US Producers

Restating its strong support for prescription sampling through professional representatives, Pharmaceutical Manufacturers Association last week adopted a voluntary code for prescription drug sampling practices.

PMA says the code was adopted to reduce the potential for diversion of pharmaceutical samples into illicit markets and to bring greater controls to the current sampling system by strengthening sound sampling practices.

"The system of sampling is beneficial to patients, physicians, the health-care system and the pharmaceutical industry," says PMA President Gerald Mossinghoff. "This code obviates the need for changing a system that has seved so well for so many years."

Legislation addressing the drug diversion problem has been pending in Congress, but lawmakers have not acted on the proposals. The measures seek to control diversion by prohibiting drug reimportation, requiring better wholesaler recordkeeping, and limiting sample distribution to physicians.

Under the sampling system, manufacturers' representatives provide starter packages to physicians for use with patients. Mr. Mossinghoff says patient starter packages enable a physician to begin therapy immediately in cases, for example, where patients are in pain or developing infections, and allows the physician to evaluate the drug immediately in a newly diagnosed patient.

If a product is not working as intended, the medication can be changed or the dosage modified without expense to the patient.

Under the voluntary code, PMA member companies will distribute samples only to licensed practitioners after a written request and take step to guard against theft and diversion.

They are also obliged to return all outdated or damaged samples to the company for disposal and will conduct an annual review of all samples in the possession of their sales representatives.

Magnesium Plant Is Slated By Norsk Hydro For Canada

The board of directors of Norsk Hydro, has recommended that a magnesium plant be built in Canada. Final decision on the project will be taken during October. If it is approved, construction can start next Spring.

Norsk Hydro's new Canadian magnesium production facility will be situated in Becancour, in the province of Quebec. The first stage will have an annual capacity of 60,000 tons of magnesium and will cost around $288 million (in US funds).

Norsk Hydro has secured a 400-acre site in Becancour Industrial Park on the St. Lawrence river, halfway between Montreal and the city of Quebec. A major factor in the choice of this location was access to a long-term and reasonable supply of electricity.

Proximity to the large American market for magnesium was also important. The output of the plant in Canada will be sold in North America and in overseas markets.

Construction is planned to commence in April next year. It is expected that production can start in the Spring of 1989 and that the plant will gradually reach full capacity by 1990/91.

Norsk Hydro has entered into a 25-year power contract with Hydro-Quebec, which also secures the electricity supply for substantial expansion of the magnesium production. Power transmission capacity is very high and supplies are very reliable in the Becancour area.

The plant represents a challenge since it will mean a 25 percent increase in the Western world's supply of magnesium, Norsk Hydro says. The company is therefore intensifying its efforts to find new areas of application through active technical marketing and the deployment of substantial R & D resources. A separate technical marketing group has been established, based in the US. The group will co-operate with Norsk Hydro's R & D center in Norway and will also work on specific development projects in the US.

Norsk Hydro believes that magnesium consumption is likely to increase by about 4 percent per year in the years ahead. Magnesium for desulphurizing iron and steel is a large growth area, but the largest potential is in the automobile industry.

News Capsule

Alcan Cuts Reduction

Alcan Rolled Products Company will discontinue production of specialty bare coil, bright trim products and coated building products at its Warren, Ohio, rolling and coating facility. The amount of aluminum used in auto and appliance trim has dropped because of styling changes and the use of substitute materials, the company notes.

Kaiser Pays Penalty

Kaiser International Corporation has agreed to pay a civil penalty of $5,500 for alleged violations of antiboycott provisions of the Export Administration act. Kaiser allegedly furnished information to Bahrain stating that certain goods did not originate from Israel or from a blacklisted company.

Atochem Marketing Plans

Atochem IUnc. will handle US marketing of hydrogen peroxide manufactured in Canada by Oxychem Canada Inc. Oxychem is jointly owned by L'Air Liquide and Atochem, a subsidiary of the Elf Aquitaine Group. Oxychem Canada is scheduled to go on stream with the new 44-million-pound hydrogen peroxide plant next September.

BP Develops Solvent

BP Chemicals has developed a new oxygenated solvent for the surface coatings and adhesives industries. The solvent, "Bisol" K, has been designed as an alternative for both MEK and MIBK and is said to offer coatings formulators significant cost savings.

Searle Forms Venture

G.D. Searle & Co. has entered a joint venture agreement involving drug delivery systems with Medi-Control Corporation, a subsidiary of Biotechnology Development Corporation. The venture will "complement our in-house research and provide impetus for development, manufacture and marketing in a direct extension of Searle's pharmaceutical business," the company says.

Pfizer Opens Office

Pfizer Inc.'s Oil Field Products Group has opened offices in Houston. Formed in 1982, the Group specializes in biopolymer chemicals for enhanced oil recovery. The copany says its choice of Texas as a headquarters for its EOR "is a measure of confidence in the vitality of the US petroleum industry over the long term.

AOSI Sells Fairfield

AOSI, a private holding company, has sold the assets of Fairfield American Corporation, its US pesticide operation, to Wellcome PLC of the UK for an undisclosed price. AOSI says the sale allows the company to concentrate on activities in specialty lubricants through its American Oil & Supply Co. subsidiary based in Newark, N.J. The company acquired Stauffer Chemical Company's synthetic lubricants business two years ago and is looking for additional acquisitions in the field, says AOS president John D. Fredericks.

Phosrock in Agrico Plan

Agrico Chemical Company has acquired 14,150 acres of undeveloped phosphate reserves in Hardee and Manatee counties in central Florida from US Diversified Group of USX Corporation. The reserves will extend the life of Agrico's adjacent Fort Green phosphate mine and beneficiation plant by approximately 12 years, says Agrico president, Robert Gwyn. The mine was previously estimated to operate into the mid-1990's.

CasChem, Nepra Join

CasChem Group, Bayonne, N.J., has completed its acquisition of the Nepera, Inc. subsidiary of Sch4ering AG of West Germany for an undisclosed price. Nepera, a producer of pyridines, niacin and niacinamide, had sales of $46 million last year.

John D. Gottwald, who has been elected vice-president of plastics and energy at Ethyl Corporation.

Takeda Buys Fallek Units, Expands in US

Takeda USA, Inc., has acquired the domestic pharmaceutical and feed departments of Fallek Chemical Company for an undisclosed price. The acquired business includes the marketing of Takeda's own bulk vitamin line as well as complementary bulk vitamins and related products.

Takeda will now sell directly to pharmaceutical, nutritional supplement and animal feed industries, using its own sales force, rather than through Fallek.

Takeda's food industry business will continue to be served by its sales representatives. Fallek will continue to operate its other domestic and export business from its Fort Lee, N.J. headquarters and other offices.

Takeda's bulk business had consisted of most of the B and C vitamins and the flavor enhancer, "Ribotide." The acquisition expands the product line to include vitamins A, D, E and others, and such related nutritional supplement products as amino acids, inositol, minerals and microcrystalline cellulose and other tablet excipients.

J&J, Becton Reach Settlement Of Patent Suit

Johnson & Johnson says it has settled its action against Becton-Dickinson for infringenment of patents covering monoclonal antibodies and flow cytometry instruments.

Under the out-of-court settlement, Becton-Dickinson will make a "substantial" cash payment, according to Johnson & Johnson. In return, Becton-Dickinson will be licensed under the instrument patents.

Becton-Dickinson says the cash payment will amount to approximately $5 million. The company says it will be exempt from making royalty payments on the first $12.5 million of annual antibody sales.

Johnson & Johnson says therapeutic applications of the monoclonal antibodies are not included in the license and are retained exclusively by Ortho Pharmaceutical Corporation, a Johnson & Johnson subsidiary. Ortho markets the agents for use in countering kidney transplant rejection and is studying other therapeutic applications.

"We believe the licensing agreement we reached will be beneficial to both companies," Johnson & Johnson says.

CD Polycarbonates Are Taking Off Now

Mobay Corporation has begun commercial production of ultra-pure polycarbonate resin at its Bayport, Tex., plant complex. Its specialty polycarbonate production facility came on line late in August, and has the capability of producing 50 million pounds of "Makralon" CD-2000 per year, for use in laser-read optical disk applications such as compact audio and digital "read only" memory disks.

The new plant will be the first domestic source of this material. For the past two years, Mobay had imported the resin from Bayer AG, its parent company in West Germany, distributing it in the US under the tradename "Merlon" CD-2000.

Since 1982, Mobay estimates that more than half of the compact disks produced in the US and Europe have been made with "Makrolon" CD-2000 supplied either by Bayer or Mobay.

R.J. Finch, vice-president and general manager of Mobay's Plastics & Rubber Division, states that the Baytown facility should be able to supply the North American markets' current and future needs. In addition to this facility, Mobay will provide domestic molders with full technical service backup, including a state-of-the art research lab in Pittsburgh.

"Makrolon" CD-2000, currently listed at $1.99 per pound (truckload quantities), is said to set new industry standards of low viscosity and high purity. Mark Witman, product manager in Mobay's Plastics & Rubber Division, explains that low viscosity is a prerequisite for success in laser-readable applications, ensuring that "mold-in stress" does not interfere with laser reading of the final product.

Bayer worked with Philips, a major producer of compact audio disks and players from 1980 through 1982, in perfecting the resin product before it was first marketed in 1982. Philips, in a joint venture with Sony Corporation, developed optical disk technology in the late 1970's. The company plans to double its compact disk production capacity in Hanover, West Germany by the end of this year. It recently intensified its presence in the US by forming a joint venture with Du Pont, the Philips & Du Pont Optical Company, in the last quarter of 1985.

The joint venture plans to have a facility with capacity equal to Philip's Hanover capacity on line in Kings Mountain, North Carolina, by the end of 1987. By 1988, capacity at this plant will go from 30 million pounds to 50

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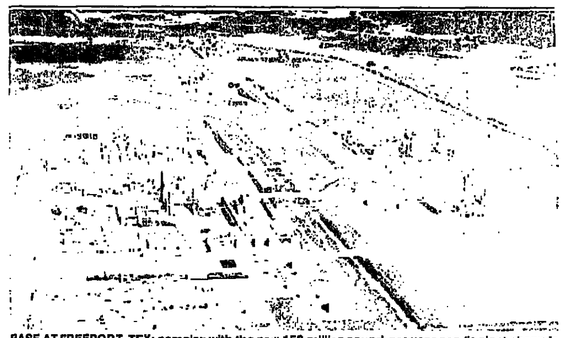

BASF AT FREEPORT, TEX: complex with the new 150 million pound-per-year acrylic plant shown in the right-center of this photograph.

BASF Corporation Dedicates Acrylic Plant in Freeport, La.

BASF Corporation is today (Monday) dedicating its second world-scale acrylic acid plant at its production complex in Freeport, Texas.

The plant has been producing material since it came on stream on August 10. The 150-million-pound unit brings total annual production capacity for acrylic acid at the site to 300 million pounds.

In addition, BASF announced that it will build an additional acrylic acid plant at its production complex in Ludwigshafen, Germany. Upon completion of the Ludwigshafen expansion, total BASF nameplate capacity for acrylic acid will have been raised from 770 million pounds per year to one billion pounds per year. The expansion in Germany includes additional distillation capacities now under construction.

BASF says it has invested more than $200 million in recent years in production facilities for acrylic acid and esters at its Freeport complex. In addition to the original acrylic monomer plant completed in 1982, there have been further capacity increases this year to acid distillation and esterification.

Production of glacial acrylic acid was added earlier this year to 80 million pounds. At the same time, 2-ethyl hexyl acrylate was expanded to 55 million pounds.

The new acrylic acid plant is based on the same propylene oxidation process used in 1982 and developed by BASF. The planned expansion from 450 million pounds in Germany currently to 650 million pounds also uses this process. The primary construction contractor for the Freeport facility was H.B. Zachry Company of San Antonio, Texas.

A fair amount of the new capacity in Freeport is aimed at the export market.

Commenting on both expansions, H.J. Kraemer, who heads BASF's Dispersions Operating Division, said, "The growing demand for acrylic acids and acrylic esters is being supported by new applications, including polymers for phosphate-free detergents and the rapidly-growing market for super absorbent hygienic products, such as diapers."

Other growth areas include adhesives applications, clear plastic film lamination, coating binders for paper and cationic drainage aids for paper.

Cyanide Controls Weighed by Gov't

The Senate approved a bill last week requiring a Federal government review of the easy public availability of cyanide, the poison used in 10 drug tampering deaths since 1982 and a rash of recent tampering threats.

The bill calls for a review by Environmental Protection Agency of the manufacture and distribution of cyanide. It also calls for better EPA controls over the retail sale of the chemical.

OILS, FATS & WAXES

Soyoil Rises to Recent High As Rains Hinder Crop Harvest

Pricing on soybean oil is higher than it has been for nearly two months. The price is rising as a result of heavy rains which are preventing farmers from harvesting their crops. Helping to maintain the price strength is a shortage of supplies on the nearby market.

Prices have been widely quoted at and above 14¼ cents per pound for crude oil, something which has not been seen since early August. By the middle of August the market slid into price levels fluctuating around 13½ cents per pound, where they had remained until last week.

Soaking rains in the Corn Belt states have kept farmers out of the soybean fields there, delaying the rush of new beans and new oil that would ordinarily have begun by now.

Buying for the past few weeks has been done almost entirely on the spot market, sources say. Customers, anticipating new crop oil pressure on the market, have been reluctant to buy too far forward.

Instead, they have been buying in a continual hand-to-mouth pattern, waiting for the soaking rains to end. "People are buying for tomorrow, but not for next week," says a broker. "A lot of buyers waited until now to cover their September and October soy oil needs, and they found new crop oil unavailable," leading to heavy spot market activity," he says.

Although the rain has been delaying the harvest, as well as the anticipated drop in prices, people are not yet worried about rain damage to the crop.

"It's too early to panic," says a trader. However, forecasts for more rain lead some to say that if the wet weather continues for another two weeks or so, there could well be a problem.

MEAL DEMAND DROPS

Contributing to the stronger pricing is a tight nearby oil situation, brought about largely by the hand-to-mouth buying habits of many customers. The oil that is available is concentrated in very few hands, according to a broker, aggravating the shortage.

Also a factor is a drop in meal demand. Previously, soybean oil was plentiful to the point of a glut situation due to heavy meal-driven crush. Now, however, cheap corn prices have reduced the demand for soybean meal, according to industry sources, which has led to a reduction in available oil.

The outlook for the next few weeks is uncertain. People who are optimistic about the rains ending soon in the Midwest feel that the price of soy oil will come down as the beans are harvested. They also expect general market conditions to stabilize, with more customers buying forward, rather than relying on the spot market and low inventories.

Others, however, while not predicting serious problems with the crop, are keeping a wary eye on the fields. Any problem would, of course, be felt in the price of the oil on the market.

Some traders are also expecting India to come into the vegetable oil market in the near future, since their peanut crop did not fare very well this year. This, as well as the general strength of the vegetable oils market, should work to keep soybean oil price firm, at least until the new beans are crushed.

PRICES TRENDLINES

WEEK ENDING OCT. 3, 1986

CHANGES/UP

Coconut oil, NY, ¾ per lb.
Cottonseed, 41% bulk, Memphis, $5 per ton
Cottonseed oil, Valley, ½c. per lb.
Lard, loose, bulk tanks, Chicago dlvd., 1c. per lb.
Palm oil, NY, ½c. per lb.
Soybean oil, Decatur, .30c. per lb.

CHANGES/DOWN

Linseed oil, Minneapolis, 2c. per lb.
Peanut, 80% bulk, SE, $30 per ton
Peanut oil, Southest (restricted), 1c. per lb.
Soybean, 44% bulk, Decatur, $8.50 per ton

OILS, FATS INDEX

The Oils, Fats & Waxes index reflects the prices of 11 representative materials in this sector and the quantity of each produced in 1985.

Oct. 3, 1986	79.85
Sept. 26, 1986	81.59
Sept. 8 1986	83.87
OCt. 4, 1985	83.31

Chemical Prices Start on Page 40

FRIDAY SPOT PRICES

MARKET CLOSE OCT. 3, 1986

CRUDE VEGETABLE OILS		
Coconut oil, NY	lb.	.15¼
Coconut oil, Pacific	lb.	.NA
Corn oil, Midwest	lb.	.19
Cottonseed oil, Valley	lb.	.14½
Linseed oil, Minneapolis	lb.	.26
Palm oil, NY	lb.	.12½
Peanut oil, Southeast (restricted)	lb.	.26nsk
Soybean oil, Decatur	lb.	.1430
REFD. VEGETABLE OILS		
Coconut oil, t.w., NY	lb.	.2035
Corn, jumbo tanks	lb.	.27
Cottonseed oil, jumbo tanks, NY	lb.	.25½
Peanut oil, jumbo tanks, NY	lb.	.34½
Soybean salad oil, NY	lb.	.1916
OILMEALS		
Cottonseed, 14% bulk, Memphis	ton	$135
Linseed, extracted, 34% bulk, Fargo	ton	$95
Peanut, 50% bulk, SE, Alabama	ton	$185
Soybean, unrost., 44% bulk, Decatur	ton	$155
FATS & GREASES		
Grease, white, choice, tanks, dlvd., NY	lb.	.10½
Grease, yellow maximum 10%, fls tanks	lb.	.9
Lard, loose, bulk tanks, dlvd., Chicago	lb.	.16
Tallow, inedible, fancy, tanks, dlvd., NY	lb.	.12
Tallow, inedible, bch., tanks, dlvd., NY	lb.	.11¾

VEGETABLE OILS

CORN OIL — The corn oil market has risen considerably in the past few weeks, spurred by heavy export movement. For a short time, the price was falling toward parity with soybean oil, in anticipation of new crop oil. Now, however, corn oil is in short supply and no softening is expected for at least the next month or two.

"Refineries are going at 100-percent-plus capacity right now," in response to the unexpectedly high amount of refined oil going out of the country. As a result, supplies of both crude and refined are scarce, and the situation is expected to stay tight for a couple of months, says an industry source.

The heavy buying was precipitated by the temporarily falling corn oil prices of a few weeks ago. Now that the price has come back up, many of those buyers are going to less expensive substitute oils, such as soy and palm. Regular corn oil customers, however, will find the oil in scarce supply, with the price expected to stay firm for another six to eight weeks or more, sources say.

LINSEED OIL — The price of linseed oil is softening, in response to customer anticipation of new crop oil. People are expecting high yields this year, but harvesting has not yet begun because of the rain that is complicating much of the agricultural picture.

"People are in no hurry to buy," says a source, pointing out that consumers are waiting to see just how much softening develops in the market. "Supplies are holding out pretty well," says an industry source, who adds that no shortages have been seen, but "if we don't get new oil soon, we will be tight."

PALM OIL — The price of this oil is rising in the wake of short coverings and a higher

OILS, FATS & WAXES

soybean oil price. "People did not buy for a long time, and then they ran to cover" their palm oil requirements, says a trader, who goes on to say that dealers' efforts to cover those sales pushed the market up.

At the moment, trading activity is quite slow. Buyers and sellers are keeping their eyes on the weather situation in soybean growing states, as palm oil prices have been tracking those of soybean oil, sources say. Although there is no real tightness of oil, offers are hard to come by.

Barring a major problem with soybeans, though, market conditions cannot support high palm prices for long, says an industry source. Palm oil production is said to be up in September compared to August. Also, consumers are currently staying out of the market in hopes that new crop soy oil will bring prices down.

SAFFLOWERSEED OIL — The price on this oil has risen to 50c. to 53c. per pound, non-break, tanks, N.Y., while quotes on edible oil range from 98c. to $1.02 per pound in drums, N.Y., delivered.

The price is on the rise in response to reports of crop damage in the Northwestern growing states. The damage is being called very serious, as extensive acreage is seeing sprouting of seeds still in the pods, rendering the affected seeds valueless for crushing.

Many dealers of safflowerseed oil are refusing to accept new customers, out of fear of short supplies in the near future, sources say. "Sellers are much more cautious," says an industry source who notes that the major seller in Montana has withdrawn from the market.

Currently, availability of oil is low, both because of the lack of carryover from last year's crop and because of reluctant sellers. Buying interest is high, with particular concern for forward positions.

SUNFLOWERSEED OIL — The price of sunflowerseed oil is quoted between 14 ¾ and 16 ½c. per pound, crude, f.o.b., Minneapolis. A flurry of trading a few weeks ago at the Gulf led to higher prices and short supplies.

The buying interest that brought about the Gulf activity has dried up, sources say, resulting in slow activity throughout the market.

Substantial wind damage was sustained by the crop in North and South Dakota, according to an industry source, who says that close to 100,000 tons of seed were lost. Another source says that it is too early to say how much of the crop was ruined, but that it could well be upwards of 10 percent.

FATS & GREASES

TALLOW — The tallow market is slowing its advance as consumer interest has begun to wane. Buyers had been supporting a stronger market in recent weeks, but are easing off their demand, apparently finding themselves more comfortable with their current supply levels.

Although the market is continuing to be strong and firm, it is in a standoff situation as consumers seem unwilling to meet sellers' prices. At the same time, more material has become available on the market, easing slightly the tight situation of recent weeks.

FATTY ACIDS

TALL OIL — Tall oil fatty acid (TOFA) production was up in August compared to the output during July, according to Pulp Chemicals Association figures.

Production of 2 percent and over rosin content fatty acid was 19.3 million pounds in August, up 13.7 percent over July's output of 17 million pounds.

For less than 2 percent rosin TOFA, August production was 18.8 million pounds, representing an 18 percent increase over July's level of 15.9 million pounds.

Soybean Export Promoted by US

Department of Agriculture plans to launch an $8.5 billion program to expand exports of US soybeans to the European Community by stepping up promotions for soybean oil.

Program funds will be used to increase European consumers' awareness of the benefits of soybean oil and also to provide technical assistance to processors to ensure that a quality product is produced, officials say.

"We want to increase soybean oil consumption in the European Community and thereby increase demand for US soybeans," says USDA Undersecretary Daniel G. Amstuz. "This program is an attempt to counter EC production aids and crushing subsidies for oilseeds."

Promotional activities will be carried out cooperatively through an agreement between USDA's Foreign Agricultural Service and the American Soybean Association, a nonprofit commodity organization representing U.S. soybean growers.

The American Soybean Association will coordinate the activity on behalf of U.S. soybean growers. USDA will reimburse the Association with generic marketing certificates for commodities owned by the Commodity Credit Corporation.

The targeted export assistance program will be administered by the Foreign Agricultural Service in accordance with Section 1124 of the Food Security Act of 1985.

AROMATIC ORGANICS

Bisphenol-A Coming on Strong With Polycarbonates Expanding

Producers of Bisphenol-A say that the market, driven by strong demand for polycarbonate resins, is tighter than earlier in the year. This picture is in the process of being altered, however, by new capacity coming on stream this quarter for two of the four domestic producers.

Polycarbonate resin demand, which accounts for about 45 percent of the BPA market, is expected to average a 7 to 8 percent growth rate for the year, averaged from among such applications as automotive, glazing, machine housing, metal replacement, and compact discs.

The other major BPA end market, epoxy resins, is said to be growing more slowly since it is more mature. A 2 to 3 percent annual growth rate is expected for this segment, which accounts for approximately 46 percent of BPA demand.

Producers report list prices of 71 cents per pound for polycarbonate-grade material, and 67 cents per pound for epoxy resin-grade material. They say that selling prices were stable during the third quarter.

Producers observe that, while feedstock phenol pricing has been increased 2 cents per pound for the fourth quarter, BPA pricing does not generally respond accordingly. "BPA pricing is not really tied to the raw material, but to the end markets," comments one producer.

Seen in this way, the strong polycarbonate resin demand, combined with anticipated turnarounds by three of the four producers during the fourth quarter, makes a strong pricing outlook.

SUPPLY DISRUPTIONS

A spokesman for USS Chemical, which has no turnaround scheduled until next year, says that a number of buyers are looking around for material because their regular suplier will be experiencing downtime. The market appears tight enough that "even short shutdowns can cause disruptions in supply," he says.

Export demand is said to be contributing to the strong growth rate for the polycarbonate resin sector. Overseas BPA demand for polycarbonate resins, particularly in the Far East, "is growing every bit as fast (7 to 8 percent) as the US," says a producer.

It is pointed out that shifting exchange rates have fostered US penetration of the Japanese market for polycarbonate resins.

However, producers note that BPA demand from the epoxy resin area has been weaker abroad than at home. Epoxy resin demand in the US, though not growing at a high rate, is "as strong as any place in the world," one producer comments.

US exports of BPA during the first seven months of the year totaled approximately 51 million pounds, up substantially from approximately 33 million pounds that were exported during the same period of 1985, according to Bureau of Census.

The new capacity in the industry comes on stream at a time when "all producers are operating their plants as hard as they can run," according to one producer, who says the demand pickup in recent months will likely result in an average operating rate for the year of 90 percent.

General Electric Company is in the startup phase with its "completely new facility" in Mt. Vernon, Ind., adjacent to the company's 220-million-pound-per-year plant. The company says the new capacity "is not yet fully operational," since they are "testing some of the processes to make sure it's in running order."

General Electric would not disclose the size of the new facility, but an industry source estimates it has a capacity of 100 million pounds per year. A captive product of BPA, GE has in the past bought material on the merchant market to meet its needs.

GE says that, with the new plant, production from which will be "strictly for our own internal consumption," the company will no longer be a merchant buyer.

Dow Chemical USA says the expansion of its 170-million-pound-per-year Freeport, Tex., unit will be completed by the end of the year. Dow would not reveal the extent of the expansion.

PRICES TRENDLINES

WEEK ENDING OCT. 3, 1986

CHANGES/UP
None

CHANGES/DOWN
None

AROMATICS INDEX

The Aromatic Organics Index reflects the prices of 14 representative materials in this sector and the quantity of each produced in 1985.

Oct. 3, 1986	167.8
Sept. 26, 1986	167.8
Sept. 5, 1986	167.8
Oct. 4, 1985	167.8

Chemical Prices Start on Page 40

BTX — Spot benzene pricing was holding steady last week in an 81c. to 82c. per gallon range, unchanged from the previous week. The market was described as quiet, with many of the regular participants attending the European Petrochemical Association meeting in Monaco.

In Europe, strong octane demand is said to be keeping toluene pricing approximately equal to benzene pricing on the spot market. In the US, however, toluene has slipped in the past couple weeks, and was quoted last week between 66c. and 67c. per gallon.

Toluene pricing could slide further in the coming weeks, industry sources note, as gasoline demand declines seasonally. However, it is observed that lead credits are being used up at a faster rate than had been expected, and that demand for unleaded premium and mid-octane gasoline has been strong.

It is believed that these factors, along with the strong European demand, could make toluene tighter than would be expected given the usual seasonal pattern.

The spot xylene market is quoted in a 67c. to 77c. per gallon range, and this market has been fairly steady in recent weeks. Paraxylene contract pricing softened 1c. per gallon October 1, to 19c. per gallon from 19 1/2c. per gallon. Orthoxylene pricing is said to be relatively stable at 13 1/2c. per gallon.

FUMARIC ACID — Producers say the market is experiencing a flat growth rate this year that is unlikely to exceed 1 percent. The product is facing competition from maleic anhydride in polyester resins and from citric acid in various food applications.

Fumaric acid "is not a very strong growth market at all," comments one producer. Spot pricing for food-grade material is quoted at 75 1/2c. per pound; for technical grade,

PRICE HIGHLIGHTS

AROMATICS IN SEPTEMBER

	CONTRACT (US $)	SPOT (US $)
Aniline ..... lb.	.33-35½	.24-.28
Benzene ..... gal.	.80-.85	.76-.84
Cumene ..... lb.	.14½-.14¾	.14½-.14¾
Cyclohexane ..... gal.	.68¼-69¼	N.A.
Phenol ..... lb.	.20-.22	.19-.20
Styrene ..... lb.	.19-.22	.19-.21
Toluene ..... gal.	.67-.73	.68-.74
Xylenes, mixed .. gal.	.80	.72-.76

AROMATICS

price range of 62c. to 62 1/2c. per pound is quoted.

Pricing is said to have been stable in recent months, and no change is believed forthcoming. This is in spite of a regular flow of imports quoted at 55c. per pound for technical grade.

Producers acknowledge that, although there is some discounting in the industry off of list pricing, imports are not competitively met head-on. The import pressure is said to be less noticeable in the food-grade area, where documentation and analysis of product are more strict.

In recent months, according to Bureau of Census figures, imports have been flowing at a rate equal to about 5 percent of domestic capacity. According to producers, imports in 1985 were most heavy from South America. This year, Japan and Europe, particularly Italy, are said to be actively involved as well.

Monsanto Chemical Company's 20-million-pound-per-year unit in St. Louis, Mo., shuttered about a year ago because of market conditions, and Kalama Chemical, Inc.'s 10-million-pound-per-year plant in Garfield, N.J., shut down for the same reason five months ago, both remain idle.

Monsanto says that "nothing has been done" to its facility that could inhibit resumption of production in the unlikely event that the market picked up considerably.

PHTHALIC ANHYDRIDE — International Trade Commission last week held a hearing on the issue of flake phthalic anhydride imports from beneficiary developing countries.

USX Corporation, on behalf of USS Chemicals, filed a petition in June contending that domestic flake phthalic anhydride producers are adversely affected by these imports, and that duty-free status under the Generalized Systems of Preferences should be revoked. BASF Wyandotte Corporation, Koppers Company, Inc., and Stepan Company have since joined the position.

USX believes the action should be taken because the US flake phthalic anhydride industry is import sensitive and adversely affected by imports from developing countries, and because these countries are internationally competitive in the market, have policies severely restricting petrochemical imports in general and phthalic anhydride imports in particular, and have reached a stage of economic development that no longer warrants duty-free status.

A key point in USX's argument that the imports have an adverse effect on the domestic industry concerns the relationship of flake to molten material. USX contends that flake and molten are separate products. Since flake accounts for only about 10 percent of the industry, the impact of imports, all of which are in flake form, is much greater if flake is viewed separately.

A Venezuelan company, Oxidaciones Organicas, C.A., submitted a brief in September opposing USX and arguing that molten and flake constitute a single US industry. By viewing molten and flake as a single industry, the Venezuelans claim that flake imports have a minimal impact on the market.

In addition, they argue that Venezuela imports virtually all of the raw materials for phthalic anhydride from the US, while exporting only 5 to 10 percent of its production to the US.

In contending that flake and molten are separate products, USX says that the necessary additional equipment and facilities to convert molten to flake is considerable, the price spread between the two products is significant, the customers are different due to significantly different use characteristics, and changes in the relative prices of molten and flake do not cause users of one to switch to the other. The Venezuelan argument aims to refute these points.

Pressure Vessel

Continued from Page 7

of the tank before it failed, and the probable sequence of events leading to failure.

Chemical and mechanical testing showed that the materials used to build the tank met or exceeded specifications, and that the welds were stronger than the base metal.

Corrosion and hydrogen cracking tests were performed on samples from the tank, and showed that the materials were indeed susceptible to hydrogen pressure cracking in the sort of environment that existed in the tank.

Magnetic particle, ultrasonic, and metallurgical studies of the fracture surfaces and adjacent areas revealed that extensive cracking had occurred, particularly in the heat-affected zone near repair welds. These areas near welds were hardened by the repair welding and especially susceptible to hydrogen cracking.

One of the cracks extended more than nine-tenths of the way through the inch-thick tank wall, leaving insufficient steel to contain the internal pressure. Once a leak penetrated at this crack, the crack continued to grow right around the tank, like unzipping a zipper. The final, near-instantaneous fracture was triggered by this crack because the toughness of the steel had been reduced by hydrogen embrittlement.

Acid Rain Poll Finds Concern Among the Public

A poll conducted for the National Wildlife Federation shows that a vast majority of Americans think that acid rain is a serious problem and that the quality of the air has not improved over the past five years, National Wildlife Federation said last week.

Seventy-five percent of those polled indicated that acid rain is either a "very serious" or "somewhat serious" problem, according to the association. While most respondents correctly identified coal-burning electric power plants and automobile emissions as the two principal sources of pollution which cause acid rain, 40 percent of those surveyed incorrectly chose nuclear power plants as a source.

While those polled chose the U.S. Environmental Protection Agency as the organization which has been most effective in dealing with the acid rain problem, they gave low marks to both the Reagan administration and Congress. Only 4 percent chose the Reagan administration as the most effective entity dealing with the problem and a mere 2 percent rated Congress as the most effective.

Four of ten surveyed feel that utility companies should pay most of the cost of cleaning up acid rain while three of ten chose the Federal government. Only 11 percent feel state and local governments should bear the costs and a mere 9 percent think consumers should pay most of the costs.

Nearly half of those surveyed indicated that the general quality of the air has worsened in the past five years while 37 percent say it has remained about the same. Only 11 percent of the respondents feel that air quality has improved.

"This survey is further evidence of Americans' concern about the acid rain problem and air quality generally. The people of this nation understand the seriousness of acid rain and have clear and strong feelings about the responsibility for cleaning it up," said Jay Hair, executive vice-president of the nati wildlife federation.

"Americans have a true sense of urg about acid rain because they are witnes its devastation of our lakes, streams forests and the wildlife which inhabit th They see acid rain's destruction of fores sources and natural and historic monum

"As acid rain's threat to human health agricultural productivity becomes more dent, public concern will grow. This Cong is obviously not reflecting the views of A icans as it fails to enact legislation to re emissions which cause acid rain," Mr. H said.

"The time has come for both the Rea administration and the Congress to ref the will of the electorate by taking imm ate and decisive action to combat the p sive acid rain problem. There can be no j fication for further stalling on the acid legislation which has been before this C gress," he adds.

The poll, conducted in August by Opi Research Corporation for the Natio Wildlife Federation, sampled the opinio more than 1,000 Americans, represent of the general population of the Un States.

Grace Develops Concrete Admixture

W.R. Grace & Co. says its researchers h developed a new admixture that can "dr matically increase" the strength and dur ity of concrete.

Grace says the new product will be a b for architects, engineers and others in construction and real estate industries, i will be able to use smaller beams c columns in high-rise buildings, thus creat more rentable floor space. It will also al for much greater design flexibility, G says.

ALIPHATIC ORGANICS

MTBE Prices Advancing, Boosted by Unleaded Demand

MTBE prices have advanced strongly since their July low of 50 cents per gallon with material on the Gulf Coast moving last week at 65 cents per gallon. Reduction in the supply of lead credits along with a greater demand for premium unleaded gasoline has bolstered both MTBE and toluene, the most widely accepted octane additives.

In addition, MTBE values have reached relative parity with toluene during mid-Summer as octane demand has improved. "In the past, MTBE was priced about 5 cents per gallon less than toluene, right now the value of toluene and MTBE to blenders is just about equal." Last week spot toluene was quoted at 67 cents per gallon, only 2 cents per gallon above MTBE quotes.

While MTBE has a higher vapor pressure than toluene, and therefore reduces the amount of C_4 material that can be blended into the gasoline mixture, its higher octane value offset the difference.

LEAD CREDITS DECLINE

"Octane is the most important thing right now" says one market observer. With lead credits on the decline and demand for higher octane blends rising MTBE has improved its status as a gasoline additive.

As gasoline prices have fallen this year in line with the decline in crude oil values, consumers have opted for higher octane gasoline in greater numbers. Higher demand has expanded the price spread between premium unleaded and regular unleaded. Currently, on the East Coast, premium unleaded is 8½ cents per gallon higher than regular unleaded gasoline at the wholesale outlet. The Gulf Coast spread is running at about 6 cents per gallon.

Assuming that the octane difference between regular and premium is about 5 points, this gives an octane value per gallon of about 1.6 cents to 1.7 cents. Prior to August, octane values per gallon had been at a traditional level of 1 cent.

With lead credits set to run out some time next year, if not sooner, tighter octane supplies are seen maintaining the current situation that has put MTBE and toluene prices at historical highs relative to unlead wholesale gasoline prices.

"We think this will be a long term trend," says one MTBE supplier. "The lead bank will be depleted by the end of the year and increased movement of higher octane gasoline will enhance the value of toluene and MTBE."

BUTADIENE — Prices for butadiene continued their downward trend of the year in September and fell 1c. per pound from selling levels in August to 11½c. per pound.

Supply pressures from imported C_4 materials and a relatively large output of byproduct C_4 streams from steam crackers in the US remain strong.

Lead phasedown in Europe has set the stage for increased butadiene supplies, which eventually find their way to US markets. "My impression," says one analyst, "is that they need the raffinate 1 (for MTBE production) and they end up refining butadiene that they don't need. The US market then becomes a major option for European marketers looking to ease their butadiene oversupply.

Raffinate 1 streams contain between 10 and 30 percent iso-butylene. This stream is run through the refinery in MTBE production where the iso-butylene is consumed.

ETHYLENE — Prices for ethylene in September have been settled at 14c. to 14½c. per pound according to industry sources. This represents a gain of between ½c. and 1c. per pound from August levels. Sellers are very pleased with these results and feel this bodes well for further improvement in prices during October and the fourth quarter.

"It's a very good sign," says one producer, "its the first time since 1979 that we have been able to gain an increase in contract pricing within a quarter." There is a realization that suppliers and purchasers have to protect themselves during volatile pricing (on feedstocks)." While purchasers have traditionally been able to lower their ethylene costs during the quarter when feedstock prices fell, sellers have been unable to advance pricing during the quarter as feedstocks have risen. Now, "the ethylene surplus is drying up," explains one marketer and this is enhancing the seller's position in the ethylene market.

Suppliers are looking for up to 2c. per pound more for their material in October.

Spot quotes for various feeds on the Gulf Coast last week reveal some slippage however from higher prices that were prompted by news of reduced production from OPEC in August.

Quotes last week, along with the change since the first week of September are as follows: ethane, 17c. per gallon, down ¼c; propane, 19¾ per gallon down 2½c.; butane, 24½c. per gallon, down 4c.; gas oil, 39¾ c. per gallon, down 1c. per gallon and naphtha, 30c. per gallon, down 2c. per gallon.

ETHYLENE GLYCOL — Ethylene glycol buyers of private label antifreeze have mostly committed themselves for this year's major purchases. Buyers had waited until the "last minute" to place their orders so as to lock in the lowest price. However, the expected success of a fourth quarter price increase motivated the antifreeze consumers to get their orders in before October 1.

"This September has been the strongest in our history," says one marketer who adds that "private label purchasers who waited as long as they could now have to get their barges on the water."

Another seller says that ethylene glycol sales to the antifreeze markets in September were 10 to 15 percent higher than had been expected.

Prices for industrial grade ethylene glycol remained relatively stable in August and September at the 16c. to 16½c. per pound range. Sellers are hoping to add 2c. per pound to that during October.

PROPYLENE — Chemical grade propylene prices reversed their year-long slide in

PRICES TRENDLINES

WEEK ENDING OCT. 3, 1986

CHANGES/UP

None

CHANGES/DOWN

None

ALIPHATICS INDEX

The Aliphatic Organics Index reflects the prices of 20 representative materials in this sector and the quantity of each produced in 1985.

Oct. 3, 1986	**222.80**
Sept. 26, 1986	**222.80**
Sept. 5, 1986	**222.80**
Oct. 4, 1985	**203.80**

Chemical Prices Start on Page 40

PRICE HIGHLIGHTS

ALIPHATICS IN SEPTEMBER

		SEPT. (US $)	AUG. (US $)
Butadiene	lb.	.11½	.12½
Ethylene	lb.	.14	.13½
Ethylene Glycol	lb.	.16½	.16½
Methanol	gal.	.29	.30
Propylene	lb.	.9¾	.9½
Vinyl Chloride	lb.	.15½	.15

ALIPHATICS

September and firmed by as much as ½c. per pound to 9¾c. per pound. Marketers will continue to push for higher pricing in October as they ask for price increases up to 2c. per pound.

VINYL CHLORIDE MONOMER — After reaching a low of about 14¾c. per pound during August, VCM has gained as much as 1c. per pound for sales negotiated in September. Says one marketer, "supplies are tight and prices will be volatile through the Fall."

Prices for sales negotiated in September are quoted between 15c. and 15¾c. per pound.

Trade Zone

Continued from Page 3

justifies such a setup and that, if need be, the arrangement could be corrected later on.

Negotiations leading toward such an agreement between the Common Market and the Gulf States probably would take three to four years to complete, Vicomte Davignon estimated.

Queried about his free trade zone, he made it clear that it would be a two-way arrangement between the EC and the Middle East countries and that others, such as the US and Japan, would be excluded. He maintains that such a pact is legally permitted under the provisions of the General Agreement on Tariffs and Trade.

Industry leaders at the EPCA meeting were cool to the Davignon proposal, arguing that the Gulf States are shipping only petrochemicals to Europe at the present time, and right now the only Middle East country that is doing that is Saudi Arabia.

Generally they feel that more time is needed to see how trade develops between the EC and the Gulf States before seriously exploring the Davignon proposal.

T. O. Hutchinson, a director of Imperial Chemical Industries PLC, told the EPCA members that he believes a period of "sustainable profitability" is within the grasp of Western Europe's petrochemical producers if they can build on their strengths and avoid their former mistakes.

The recurring themes of past EPCA meetings, he noted, have been low prices, poor profitability, overcapacity, shortsighted marketing policies, environmental problems and overestimated future growth. It is significant, he noticed, that such topics as product innovation, research and technology have been missing from the list.

Today, he feels there are a number of pluses going for the industry. Overcapacity of the major petrochemicals in Western Europe has largely been eliminated, Mr. Hutchinson observed. Furthermore, considerable flexibility has been designed into crackers.

In the mid-1960's, European petrochemical operators fed naptha almost exclusively into their crackers. Currently, only 70 percent of feed is naphtha, with the balance in gas oil, LPG and ethane. Industry occupancies, these days, the ICI executive stated, are better than they have been at any time since the early 1970's.

"Perceptions of growth are now more realistic than hitherto," he continued, and this has been reflected in a wiser approach to investment." He also pointed to the industry's ability to innovate at the process and product levels, citing the development of faster-growing, market-focused derivatives within the bulk sector. Another big plus, he added, is the fact that much has been done to improve the environment.

On the minus side, Mr. Hutchinson emphasized, is that profitability, while better than during the early 1980's, is still inadequate to justify reinvestment in petrochemicals. This leaves open, he said, an unanswered question for the 1990's.

Pointing to the inaccuracy of earlier forecasts, Jacques Pucchal, chairman of Atochem, asserted that it is difficult to predict what future growth will be with the industry has been so mistaken in the past. He suggested that profitability must be improved now, while the general economic situation is better.

Mr. Pucchal argued that the established producers in Europe, Japan and the US must share equally the burden of newcomers into the field. However, he said, he is confident about Europe which, he feels, has a big edge in raw materials.

"The cheapest way to move crude oil to its end-market in Europe," he maintained, "is still to refine it in Europe and to deliver it directly to the market."

Trinidad Firm Plans Expansion

Financing agreements have been signed for a $230 million ammonia project of Trinidad Nitrogen Co., Ltd. (Tringen), a corporation owned 51 percent by the Government of Trinidad and Tobago and 49 percent by W.R. Grace & Co.

The expansion by Tringen will more than double its ammonia capacity from 360,000 metric tons per year to 810,000 tons by adding a second, complete plant adjacent to the existing facilities at Port Lisas on the West Coast of Trinidad.

The venture will utilize the extensive natural gas reserves in Trinidad and Tobago, and will generate net foreign exchange benefits for the country estimated at $38.1 million per year.

The government has been attempting to reduce its dependence on the petroleum sector, which currently accounts for most of the nation's exports.

In addition to production facilities, the project includes two storage tanks, a new loading dock and electricity generating facilities.

Funds are being provided primarily by the International Finance Corp., the World Bank affiliate which finances private sector business in developing nations. Technical support and project management is being provided by a Grace subsidiary.

Toxic Leaks At Nuke Plants

Groundwater under at least seven nuclear weapons plants is contaminated with high concentrations of toxic chemicals and radioactive materials, say Congressional investigators.

"In some cases solvent contamination exceeds proposed drinking water standards by a factor of 1,000 or more. In other cases, the radioactive material in the groundwater is more than 400 times greater than the drinking water standards, says a report by the General Accounting Office on conditions at nine plants and laboratories.

The report quotes the Energy Department, which owns the plants, as saying the contamination poses no threat to public health because it is generally confined within plant boundaries or quickly becomes diluted or dissipated if it has migrated away.

Sen. John Glenn, D-Ohio, a member of the Senate Governmental Affairs subcommittee on nuclear proliferation for whom the report was prepared, called the information "shocking and frightening."

"What these figures show is that the Department of Energy and its predecessors have been carrying out their mission to produce nuclear weapons with an attitude of neglect bordering on contempt for environmental protection," says Sen. Glenn, who released the report.

According to the report, nitrates and chloride are above drinking water standards at the Feed Materials Production Center in Fernald, Ohio. At the Savannah River complex in South Carolina, solvents have been reported at levels more than 30,000 times greater than drinking water standards allow.

And at the Y-12 Uranium Separation and Materials Fabrication Plant at Oak Ridge, Tenn., solvents have been detected at levels 1,000 times greater than proposed drinking water standards and mercury has been detected at levels 500 times the standard. Mercury has also contaminated an off-site creek bed and its flood plain.

Textile Makers Again Gear Up

Nothing short of legislation spelling out fair trade will ever solve the textile and apparel industry's imports problem, Dewey L. Trogdon, president of the American Textile Manufacturers Institute, said last week.

Speaking before some 300 members and guests at the opening session of the 80th annual meeting of the North Carolina Textile Manufacturers Association last Thursday, Mr. Trogdon, chairman of Cone Mills Corporation, said, "Textile and apparel imports are entering the country at the rate of 30,000 square yards per minute.

"At a rate of more than 1 billion yards a month, that's enough material each month for a shirt for every man, woman and child in the United States," he said.

The industry "cannot wait for the government to recognize the compelling case for erecting a strong and comprehensive trade policy, because that day may never come.

"The 276 votes for the textile bill override vote were votes of no confidence in the administration's conduct of international trade," he said.

"Nothing but a law spelling out fair trade will produce fair trade," Trogdon said. "Not promises, not presidential commitments. Not bilaterals. Not MFAs, not studies, not commissions, not a strong dollar, not a weak dollar, not congressional letters to Ronald Reagan or speeches," he said.

"In every month since the original textile legislation was introduced in March 1985, a record has been set for imports or for the textile and apparel trade deficit," he said.

"Since the bill was vetoed last December 17, with textile trade it has been business as usual. Imports shot up 42 percent in January. In February another new record.

"And in July 1986 — the highest month in history — 1.256 billion square yards were imported. The textile and apparel trade deficit, a record $16 billion in 1984 and $18 billion in 1985, likely will go over $20 billion in 1986."

And the situation is going to get worse, Mr. Trogdon predicted. Pointing to what he called "outrageously generous" agreements with Hong Kong, Taiwan and Korea, he said the United States signed away another chunk of the American market in an agreement with Turkey.

Oil and Gas Act Backed by NAM

The National Association of Manufacturers last week urged the Senate to adopt the "Oil and Gas Production Revitalization Act" to "ensure our domestic energy solvency and...an energy secure future."

In a letter sent to all senators, Alexander Trowbridge, N.A.M.'s president, said, "S. 2857 would remove impediments to domestic research, exploration, and development that are sorely needed in the short-term, while providing long-term guidance and policy evaluations at the highest level of government to ensure...energy solvency and...an energy secure future."

The bill is expected to be considered before adjournment, possibly in the form of an amendment to other pending legislation.

Mr. Trowbridge pointed out that, while N.A.M. members have enjoyed the benefits of cheaper energy, "the bloom may soon be off the rose."

He said domestic energy supplies and national security could be adversely affected by the fact that foreign oil cartels can readily dictate prices in the world oil market. While such effects have more long-term implications, he said certain actions indicate that they should be of concern to legislators now.

"The count of active rotary drilling rigs in the U.S. has fallen from a high of 4,530 in 1981 to 740 as of September 15, 1986," he warned. "Major domestic oil companies are reducing their technical research and exploration budgets by as much as 25 percent in the coming year, and the 'trickle down' effect of the energy industry crisis is being felt in all sectors of the economy."

Mr. Trowbridge concluded by saying, "We remain convinced that an increasing reliance on unstable foreign sources for our energy security is an unacceptable scenario at any price. A sound volume of domestically produced oil and gas must be insecured.

Du Pont, DNA Firm Are In Agreement

DNA Plant Technology Corporation and E.I. DuPont de Nemours & Co., have agreed to cooperate on the development of new value added plant varieties which will benefit the food industry.

Under the multiyear agreement, DuPont will support DNAP's application of biotechnology to develop proprietary plant varieties in which specified desireable characteristics are enhanced. The agreement also provides for DNAP to participate in the commercial opportunities arising from the research.

"This proprietary research and product development work is a significant further application of our technologies for added value to plant-based products of major commercial importance," says Richard Last, president and Chief Executive Officer.

Chemical Finance

Five Sources of Gas Available on Short Notice

Five sources of natural gas are available on twelve months' notice any time the current US surplus is used up, according to American Gas Association. They are: uncommitted gas in the Continental US, up to 1 trillion cubic feet; infill drilling of existing fields, up to 400 billion cubic feet; Mexican gas, up to 200 billion cubic feet; and liquefied natural gas, up to 50 billion cubic feet.

"Overall," said AGA president George H. Lawrence, "there is a short term gas supply response potential of 1.15 trillion cubic feet to 2.45 trillion cubic feet per year that is available for use in the next few years."

Genex Chairman Purchases Shares From Koppers

Robert F. Johnston, chairman and co-founder of Genex Corporation, Gaithersburg, Md., has purchased 1 million shares of Genex common stock from Koppers Company in a private transaction. As a result, Mr. Johnston became the largest Genex shareholder, owning almost 2 million shares — 16 percent of the total outstanding. Koppers continues to hold just under 11 percent.

Genex is a leader in the application of protein engineering technology. The company manufactures an enzyme-based drain opener and markets it through distributors and manufacturing representatives nationwide.

Kaiser Aluminum Expects Better Results

The Aluminum Division of Kaiser Aluminum & Chemical Corporation expects to report a third-quarter 1986 operating loss sharply lower than the $36 million loss recorded a year ago, Cornell C. Maier, chairman, told a meeting with security analysts at the company's facilities near Spokane, Wash.

The company's two major rolling mills — the newly modernized Trentwood plant near Spokane and the Ravenswood, W.Va. plant — have now positioned themselves to create additional gains in overall Aluminum Division efficiency, Mr. Maier said.

PPG Completes Acquisition From Litton

PPG Industries Inc., Pittsburgh, Pa., has completed the acquisition from Litton Industries Inc. of the medical electronics business of Hellige GmbH, based in Freiberg, West Germany, and certain of the assets of Datamedix in Sharon, Mass., a distributor of the Hellige and other medical diagnostic devices.

PPG expects to complete soon the acquisition of certain interests of Honeywell, Inc., as announced at a press conference near the United Nations headquarters in New York a month ago.

Precision Aerotech Offering 1 Million Shares

Precision Aerotech, Inc., has filed with Securities & Exchange Commission for an initial public offering of 1 million shares of common stock, of which 900,000 will be sold by the company and 100,000 by certain selling shareholders. Net proceeds will be used to repay bank debt and debt assumed to make acquisitions. Application has been made to list the shares on the New York Stock Exchange.

Procter & Gamble Selling South African Company

Procter & Gamble Company, Cincinnati, Ohio, has agreed to sell the South African operating unit of its Richardson-Vicks Incorporated subsidiary to Whelk Investments Pty. Ltd., a company recently formed by Richardson-Vicks' local South African management.

In the 1985-1986 fiscal year, the South African operation had sales of about $12 million and earnings of about $250,000, producing and marketing a number of health and personal care products from a r[illegible]e facility near Johannesburg. Earlier this year, P&G sold RVI's home care products unit — primarily Formby's products for furniture care — and the Mill Creek line of hair and skin care products.

Schering-Plough to Resume Capital Stock Purchases

With completion of the acquisition of Key Pharmaceuticals Inc., Schering-Plough Corporation is reinstituting a plan to purchase a maximum of $300 million worth of its capital stock, of which there are now 62 million outstanding shares, Robert P. Luciano, chairman and chief executive officer, told a meeting of British financial analysts and portfolio managers in London.

Capital expenditures will total about $120 million this year, having eased from a peak of $180 million in 1982, Mr. Luciano noted. Expenditures next year will be at the same level, but this will include about $10 million for Key, which was not in the full-year 1986 budget.

Newmont Recapitalizing Magma Copper Subsidiary

Newmont Mining Corporation, the New York-based diversified producer of gold and other metals, has adopted a plan to recapitalize a wholly-owned subsidiary, Magma Copper Company, by contributing to the company's capital the stock of another 100 percent owned subsidiary — Pinto Valley Copper Corporation, and all but $100 million of intercompany debt.

This restructuring will allow Magma Copper to raise the funds needed for a major retrofit and expansion of Magma's Arizona smelter and an expansion of its refinery, and for an anticipated in-situ oxide ore leaching project.

Under the plan, 80 percent of Magma's common stock will be distributed as a special dividend of Newmont shareholders after Magma has arranged the smelter-related financing, said Gordon R. Parker, chairman of Newmont.

Church & Dwight Buying Veterinary Business

Church & Dwight Company, Princeton, N.J., is expanding its agricultural business by signing a letter of intent to acquire the stock and assets of National Vitamin Products Company, Minneapolis, Minn., from the Stanchfield family.

National Vitamin produces milk-based products for the dairy herd replacement, veal, swine, horse and specialty markets, and is the third largest supplier of milk replacers to the dairy herd replacement market.

Pharmacia Raising Stake in Electro-Nucleonics

Pharmacia Inc., Uppsala, Sweden, has signed a contract to acquire 470,000 shares of the outstanding common stock of Electro-Nucleonics Inc. Together with Pharmacia's existing ownership of 250,000 ENI shares, this will bring the Swedish company's interest in ENI to approximately 15 percent. Pharmacia has the right to increase the holdings to 20 percent.

Salsbury Unit Changes Name

The custom chemicals manufacturing unit of Salsbury Laboratories will be known as Salsbury Chemicals, it was announced last week. Along with the name change, an expanded marketing services organization has been implemented.

"Salsbury will be able to work more closely with basic chemicals manufacturers. We have set up three regional offices for the Northeast, the Midwest and by year-end will have an office to serve the Southeast," says John Pezzanite, the new director of marketing for Salsbury Chemicals.

"All of our regional marketing managers have technical degrees and have worked in research, process development and tech service. We believe these experience backgrounds will allow Salsbury to work with major firms in developing special chemistry for new product intermediates and allow us to offer the medium-size producer complete formulation development and manufacturing," Mr. Pezzanite added.

Salsbury is also expanding Charles City headquarters staffing in its commercial development unit.

"Robert Lerner, our new manager of Commercial Development, is a recognized authority in fine chemicals development and holds a dozen patents with a similar number of patents pending.

His team will be a major process development source for our customers. With our new in-field technical marketing and expanded developmental services program, Salsbury expects to further its capability to serve the chemicals manufacturer," observes Pezzanite.

Salsbury Chemicals also reported a major volume growth in its manufactured products based on aromatic nitration chemistry. A Fortune 500 firm has given the company a major contract for a new nitration intermediate and a medium-size end-user has signed a multi-year contract for a specialty nitration formulation. Nitration chemistry is highly reactive and can be explosive.

Salsbury Laboratories, is the animal health subsidiary of Solvay America and markets proprietary veterinary and animal health products in 90 countries.

Nat'l Distillers Wins High Rating

Mabon, Nugent & Co. is rating the shares of National Distillers & Chemical Corporation as attractive (the second highest rating) in the wake of National Distillers' announcement that it will acquire the ethylene, ethylene oxide and polyethylene business of Enron Corporation and sell its own liquor business.

"In later year, management may be faulted for making a mistake in judgment regarding polyethylene, but management can no longer be viewed as sleepy," stated Robert Reitzes, Mabon Nugent's chemical analyst in a recent report.

After the acquisition, National Distillers will have approximately 3.4 billion pounds polyethylene capacity, 230 million pounds polypropylene capacity, 1.7 billion pounds ethylene, 300 million pounds propylene a 200 million pounds of ethylene glycol, Reitzes noted.

National Distillers now has about 20 p cent of US polyethylene capacity, the anal adds. The four largest producers — Natio Distillers, Dow Chemical Company, Un Carbide Corporation and E.I. du Pont Nemours & Co. — control 55 percent of t market, he notes.

"We believe these companies will atte to keep prices up. In our judgment, the acq sition will provide increased pricing stabi in the polyethylene market," Mr. Rei said.

In propane, National Distillers is invest heavily, and Mr. Reitzes believes the c pany will continue to acquire propane tributors over the next several ye Propane margins vary substantially betw wholesalers and retailers, but the aver return for all of these businesses appro mates 18 to 20 percent, it is noted.

The Mabon Nugent chemical analyst lieves polyethylene earnings should ben from personnel rationalization, economie scale, lower freight costs and reductio the total research and development bud He estimates that these savings could re from $20 million to $30 million by 1988, cents per share. To be conservative, Mr. itzes has not included these potential savi in his earnings projections.

Those projections are $3.85 per share 1987, following a projected $2.35 per s this year, and $5.25 in 1988.

Other factors helping these earnings a lower tax rate, the termination of a high gas contract in 1987, significantly expan polyethylene and propane capacities projected tightness of supply for p ethylene.

DRUGS & FINE CHEMICALS

Caffeine Demand, Price Rising; Customers Complain of Shortages

Tightening supplies have pushed caffeine pricing higher during 1986, and some players claim that hand-to-mouth sales are the rule rather than the exception. Other players, while acknowledging shrinking supplies, do not characterize the situation as being that serious.

Synthetic caffeine is priced between $4.55 and $4.95 per pound. Natural caffeine is priced similarly. At the beginning of the year, caffeine's price ranged from about $4.30 to $4.50 per pound. Sources expect more firming, and one comments that the $5-per-pound mark may be reached, and passed, in the near future. "(Prices) probably will be drastically increased in 1987," says this source.

Synthetic-caffeine suppliers note that activity has increased for natural caffeine, and that when natural supplies are tight, some purchasers turn to the synthetic product, thereby diminishing those supplies as well. Generally, the pharmaceutical industry uses synthetic caffeine, while the beverage industry uses natural. This is not a hard-and-fast rule, though.

A major domestic supplier concurs that its sales have largely increased this year, and that "there is pressure being put on manufacturers" for more product. Others share similar scenarios. However, while all surveyed attest to rising demand, some players cite additional reasons. For example, a major importer, who says his company is "more or less sold out" of caffeine, claims that a poor Brazilian coffee bean harvest is hurting the industry. Caffeine is often extracted from coffee beans.

SEVERE DROUGHT

Figures from the Coffee Information Institute, in New York, show that an estimated 11.2 million bags of coffee beans will be produced in Brazil this year, considerably down from 1985's 30 million bags. A bag is 60 kilograms (132 pounds). A spokesman says that production is down because of a severe drought, and that the updated 1986 estimate (made in September) is a decrease from the original estimate of 15 to 16 million bags.

Another importer, who imports Chinese material, says that his company is beginning to have trouble satisfying customers because demand in China is rising, and he thinks the Chinese will become more conservative in exporting their caffeine.

Overall imports are down through July, compared to the same period in 1985. Through July, about 2.5 million pounds entered the US. Through July 1985, the total was slightly more than 3 million pounds. West Germany remains the major exporter to the US, selling a little less than 2.2 million pounds here through July. This figure represents a considerable fall since last year.

Buyers, as well as suppliers, are complaining that the supply situation is worsening.

PRICES TRENDLINES

WEEK ENDING OCT. 3, 1986

CHANGES/UP
None

CHANGES/DOWN
None

DRUGS INDEX

The Drugs & Fine Chemicals index reflects the prices of 10 representative materials in this sector and the quantity of each produced in 1985.

Oct. 3, 1986	211.16
Sept. 26, 1986	211.16
Sept. 5, 1986	211.16
Oct. 4, 1985	211.16

Chemical Prices Start on Page 40

One buyer laments, "If I weren't a customer of (a large supplier), I wouldn't be able to get it." The buyer confirms that prices are rising, and says he knows of other buyers having difficulty getting caffeine. "The market is going crazy," he says, "if you can get caffeine in the first place." Another buyer claims that he called companies for a price quotation, and was unable to obtain one, being told that no caffeine was available at the time.

One buyer says he has heard that two major soft drink manufacturers are buying large amounts of both natural and synthetic caffeine, making the situation even tougher for other buyers. Suppliers have no comment.

The industry is showing interest in a new soft drink called "Jolt Cola." Billed by its makers as having "All the sugar and twice the caffeine," it has received some national attention. A company spokesman says the product was introduced in April, and is currently available in 17 states. By the end of October, though, 35 states will be selling the

DRUG & FINE CHEMICAL IMPORTS: JULY

CENSUS BUREAU REPORTS ON THE TOP DRUGS

	JULY		JUNE	
	QUANTITY	$ VALUE	QUANTITY	$ VALUE
Acetaminophen ..... lbs.	362,774	939,829	860,282	1,894,644
Benzenoid drugs, n.s.p.f. ..... lbs.	214,854	1,422,750	201,373	2,113,000
Brucine ..... oz.	75,000	157,500	85,400	37,585
Caffeine ..... lb.	384,947	1,409,188	385,650	1,558,409
Citric Acid ..... lb.	5,059,952	3,020,228	4,249,776	2,685,851
Cream of Tartar ..... lbs.	162,811	84,074	247,530	136,449
dl-pantothenic acid ..... lbs.	452,085	1,585,291	435,725	1,529,508
Iodine, crude ..... lbs.	143,465	829,133	108,025	603,254
Monosodium glutemate ..... lbs.	6,722,198	3,672,441	7,261,118	3,996,495
Niacin, pharmaceutical grade ..... lbs.	143,99	323,136	99,207	214,353
Penicillin G salts ..... lbs.	125,209	1,847,517	151,544	1,910,628
Penicillin n.s.p.f. ..... lbs.	9,762	1,225,412	15,012	1,995,548
Phenylephrine HCl ..... lbs.	—	—	—	—
Potassium sodium tartrate, (Rochelle Salts) . lbs.	40,000	35,201	88,016	35,695
Quinidine ..... oz.	177,916	829,986	426,585	1,309,033
Quinine and its salts ..... oz.	71,420	162,150	110,654	238,008
Saccharin ..... lbs.	80,274	166,531	146,096	313,359
Steroid hormones, synthetic ..... gms.	2,588,988	1,773,916	733,436	497,332
Sulfamethazine ..... lbs.	130,292	556,802	185,672	785,711
Sulfathiazole ..... lbs.	141,316	315,875	31,349	143,229
Tartaric acid ..... lbs.	547,070	529,023	325,251	332,316
Vitamin A ..... lbs.	421,896	2,826,451	376,712	2,593,404
Vitamin B_1 ..... lbs.	83,690	643,726	92,628	780,045
Vitamin B_2 ..... lbs.	116,300	1,886,684	231,749	3,054,869
Vitamin B_{12} ..... lbs.	85,332	880,900	13,663	401,044
Vitamin C ..... lbs.	1,424,313	4,915,637	1,455,843	4,902,496
Vitamin E ..... lbs.	456,796	2,365,154	271,910	1,246,476
Vitamins, provitamin, etc., n.s.p.f. ..... lbs.	133,338	595,634	61,672	169,021
Woolgrease, n.s.p.f. ..... lbs.	826,256	250,801	965,102	807,271

DRUGS & FINE CHEMS

cola. Caffeine suppliers say they are curious about the cola, and will examine its growth.

Coinciding with market tightness is an apparent stabilization, or decline, of decaffinated coffee consumption in the US. The International Coffee Organization, in London, says that consumption of decaffinated coffee actually decreased this year, according to estimates. A spokeswoman says 17.1 percent of regular coffee drinkers drink decaffinated coffee. This percentage was 17.3 percent in 1985.

Nineteen eighty six marks the second consecutive year the total has fallen. In 1984, the percentage was 17.7 percent. The year before that, however, ICO estimated that 15.3 percent drank decaffinated coffee. The spokeswoman said that rapid or steady annual increases were the norm until 1984.

ESTROGEN — Questions have been raised about the overall efficiency of a new estrogen skin patch developed by Ciba Geigy (CMR, 9/22/86, p. 9). The questions have been raised by Ayerst, which sells an oral-dosage estrogen.

Ciba Geigy's product, used twice weekly for three-and-one-half days at a time, is placed on the abdomen. This method allows estrogen to bypass the liver which, according to Ciba Geigy, helps avoid metabolism problems. The company also boasts that its estrogen form, 17-beta estradiol, closely mimics woman's natural estrogens before menopause.

Ayerst says that while the new technology is interesting, it worries the public may be misled about its potential. Primarily, Ayerst argues that the patch is not indicated in osteoporosis, while oral dosage forms are. Among the company's other arguments is that Food & Drug Administration classifies the patch as "3-C," meaning it is not regarded as a significant advance in therapy.

Ciba Geigy acknowledges these points, but counters that it did not intend to strive in several indications, because of lengthy FDA investigations, and claims that studies are being done to perfect dosage levels for treating osteoporosis. "That just takes time," says a spokesman. He adds that "(Ayerst) is highlighting their high points, we highlight ours."

MONOSODIUM GLUTAMATE — Miwon Co., of South Korea, is raising its export price for MSG by 7 to 8 percent, the company said.

Cheil Sugar Company, another South Korean source of MSG, announced a similar increase on exports to the US three weeks ago (CMR, 9/22/86, p. 22).

A Miwon spokesman says prices were increased because of increased manufacturing costs, and because of the US dollar's loss against the South Korean currency, the won.

Monsanto Sells Chemical Unit

Monsanto Company last week said it sold its paper chemicals business to a unit of Akzo N.V. The terms of the transaction were not disclosed.

Akzo gets the rights to some Monsanto patents and technology as well as the "Mersize" and "Monsize" paper sizing agent trademarks. Included in the sale are Monanto's wholly-owned subsidiary FRP Company, with principal manufacturing facilities at Baxley, Ga., and paper chemical assets at Nitro, West Va., and LaSalle, Que., Canada.

Monsanto's "Polygrasp" resins, "Scripset" paper coatings and specialty chemical coating resin operations are not part of this transaction. Akzo, however, will become a manufacturer's representative for Monsanto for sales of "Scripset" to the paper industry.

In another divestment during the week, Monsanto sold its vanillin business to Rhone-Poulenc, Inc.

Roger F. Sellew, commercial director of the detergents division at Monsanto, said, "We have been operating vanillin at a reasonable profit, but it is a specialty business that is not strategic with the division's major emphasis on detergent materials and food phosphates and acidulants."

The sale includes Monsanto's Seattle, Wash. plant where vanillin has been manufactured since 1952. Rhone-Poulenc plans to continue production and sale of vanillin and substantially all workers at the Seattle plant are expected to be offered employment.

Monsanto's vanillin plant at Seattle is rated at over 2,000 tons of capacity annually based on lignin, while Rhone-Poulenc makes vanillin at a plant of comparable size at San Fons, France, using guaiacol as raw material.

A Rhone-Poulenc spokesman said the company plans to continue production at both points. In addition, Rhone-Poulenc is a producer of ethyl vanillin at its Freeport, Tex. complex.

Goodrich PVC Absolved By Judge

B.F. Goodrich says that an Iowa trial court has granted a summary judgement in its favor dismissing all claims against the polyvinyl chloride (PVC) plastic manufacturer in a lawsuit stemming from a 1978 department store fire in Des Moines.

Rather than carry an appeal of the decision to the Iowa Supreme Court, attorneys representing families of the fire victims agreed with B.F. Goodrich on a settlement that allowed the summary judgement to stand.

Goodrich was the sole remaining defendant in the suit, originally filed against a number of manufacturers, an industry trade association and a testing organization.

"We are glad to have this case resolved," said David H. Hall, president of BFG's Geon Vinyl Division. "We know PVC to be a safe product and have constantly maintained that it had nothing to do with the tragic fire at the Younkers Department Store in Des Moines.

"PVC is one of the most thoroughly tested products of its kind," Hall added. "It has been tested by government agencies as well as independent testing organizations and continues to be specified in a broad range of applications.

Superfund Tax

Continued from Page 3

negotiators reluctantly agreed to substantially higher taxes on the oil industry, but only after the House accepted a "tax differential" favoring domestic crude oil producers.

Under the plan, imported oil would be taxed at the rate of 11.7 cents per barrel to raise $1.5 billion over the five-year period. US producers would pay $1.2 billion, taxed at the rate of 7.8 cents per barrel.

But as the only $200 million to the original superfund, the American Petroleum Institute called the massive increase "totally unjustified and unfair."

"The record is clear that six thousand companies from every industry, as well as local, state and Federal governments, have contributed to waste sites, and the petroleum industry's share is very small," the institute says.

"Yet, under this proposal, this single industry would be burdened with costs as high as all the rest of industry combined."

The CMA spokesman notes that the chemical industry would pick up about 20 percent of the oil industry's tab. "We're going to end up paying a lot more overall because we'll pay a big part of the oil tax — oil being a chemical industry feedstock," he says.

Rep. Downey, however, described the final proposal as a "classic compromise," noting that House members had hoped for a heavier assessment against chemical companies, the Senate had initially approved a higher broad-based tax, and oil state lawmakers had lobbied to ease the burden on petroleum producers.

While all parties involved in the three-year reauthorization fight expressed relief that a compromise had finally been reached, they acknowledged that a presidential veto is a distinct possibility.

Treasury Secretary James Baker warned last Summer he would recommend a veto of any superfund bill that significantly increase taxes on petroleum or imposed a new broa tax across the manufacturing sector. O Thursday, a spokesman for the Treasury D partment said, "The proposal is such that t Secretary of the Treasury will be unable recommend that the President sign the mea ure."

He also criticized the conferees' adopti of a tax differential for foreign and domes oil. "This is the equivalent of an oil impo fee, which this administration opposes," h official said.

"The veto drums are beating loudly," sa Sen. Frank Lautenberg (D-N.J.). "But befo the President takes such an action he shou think carefully about the ramifications of veto. A veto would starve this program a possibly kill it."

He points out that due to the upcomi adjournment of Congress, there will be chance for a veto override.

"The message to the President is clea says the Senator. "Both houses of Congr approved superfund by overwhelming ma gins. If there is a veto, the President is on step with the country."

The tax agreement came one year and day after Congress missed the deadline renew taxing authority for the governme most ambitious anti-pollution program.

Technically, superfund expired Sept. 1985, and EPA lost its authority to coll taxes from the petrochemical industry to nance the cleanup of some of the nati most hazardous waste sites.

Work on the sites has continued on scaled-down basis since then, financed money left over from the program's first years and by emergency funds appropri by Congress.

The tax agreement also came one day ter EPA told contractors at 104 of the tion's worst toxic dumps it was cancel their contracts at the end of the month cause of a lack of superfund money.

Agent Orange 'Breakthrough' Claimed in N.J.

The New Jersey Agent Orange Commission released details of a study they say provides "a major scientific breakthrough" in determining exposure of Vietnam War veterans to the toxic herbicide dioxin.

Allen E. Falk, commission chairman, says the results of the study "will re-open the Agent Orange issue" and the findings promise to provide answers to veterans and their families about the extent of their exposure to dioxin.

Dioxin, a known animal carcinogen, was a byproduct and the key contaminant in Agent Orange, which was used by US military forces during the Vietnam War to eliminate jungle cover.

The Vietnamese and thousands of Vietnam veterans exposed during spraying operations blame Agent Orange for a range of health disorders, including cancer. The US government and the chemical industry maintain no conclusive link has been shown.

A lawsuit filed against seven Agent Orange manufacturers by veterans from the US, Australia and New Zealand resulted in a $200 million settlement in 1984. The litigation, currently under appeal, included 245,000 claims of health damage.

At a Capitol Hill news conference, scientists said the new research shows for the first time a biological "fingerprint" left in veterans' blood by dioxin.

"We have found a method which can precisely show the levels of the dioxin isomer used in Agent Orange, today, some 15 to 20 years after exposure, in the blood and fat tissue of Vietnam veterans," says Mr. Falk.

Furthermore, he says the tests found levels of dioxin 10 times higher in heavily exposed veterans than in other Vietnam-era servicemen.

However, Mr. Falk acknowledges the research on 10 highly exposed veterans stops short of linking their medical problems directly to the chemical.

But the results of the research, he adds, should prompt the Federal government to drop its claim that Congressionally-mandated studies examining the possible link between exposure and disabilities cannot be completed because of a lack of a means to determine exposure.

The 10 highly exposed veterans were studied along with 17 "control" cases, including veterans who served in Vietnam without direct Agent Orange exposure, and veterans of the area who did not serve in Southeast Asia.

Levels of dioxin (2, 3, 7, 8-tetrachlorodibenzo-p-dioxin) averaged about 48 parts per trillion in exposed veterans, compared to about 4 or 5 ppt in those who saw no Vietnam service, said toxicologist Ralph Fogelman.

"The implications this finding may have on toxic liability cases is mind-boggling," says Rep. Bob Edgar (D-Pa.), chairman of the House Veteran Affairs subcommittee on health care.

"It means that the victims of dioxin exposure at Times Beach, Mo., can one day measure the level of exposure they received. It means the factory worker in Johnstown, Pa. can one day determine if the toxic chemicals she works with everyday are in her bloodstream," he said.

Rep. Tom Daschle (D-S.D.) said that if the findings of the New Jersey study are verified, "... they could allow us, for the first time, to conclusively identify veterans exposed to Agent Orange and, therefore, to make judgements about its effects. That is a critical first step."

EPA, Avtex Agree On a Cleanup Study

Avtex Fibers Inc. and Environmental Protection Agency have entered into an agreement that will lead to the clean-up of a toxic waste dump on the superfund national priority list.

An Avtex plant at the Front Royal, Va., site has manufactured rayon for years. Contaminants found include scrap batches of viscose, zinc and other wastes which were disposed of in 23 unlined basins and landfills.

Samples taken from the basins included high levels of carbon disulfide and phenols. EPA says they have also seeped into the water table and contaminated seven nearby wells.

Rep. Boxer Seeks A Hold On Waste Burn

Rep. Barbara Boxer (D-Calif.), author of Federal legislation to place a moratorium on ocean incineration of toxic wastes, is urging California Gov. George Deukmejian to approve a similar bill which has passed the state legislature.

A telegram from 14 members of the California congressional delegation was sent to the governor in support of the bill by state Sen. Herschel Rosenthal.

The telegram asks Gov. Deukmejian to sign the bill into law in order to "protect the California coast and the health of our citizens." The measure would prohibit ocean burning of toxic wastes off the coast until more reserach is completed and assessed.

"PREMATURE RUSH"

The intent of both the Federal legislation and the state bill is to stop what Rep. Boxer describes as "the premature rush to ocean incineration technology."

The Boxer bill focuses on Environmental Protection Agency's permit process and requires a moratorium on test burns. The Rosenthal measure calls for a state interagency study of the problems faced by coastal communities regarding the onshore transport, storage and handling of toxic materials intended for ocean incineration.

Both would delay implementation of ocean incineration until the questions about the technology are more fully explored.

"I am increasingly alarmed by EPA's headlong push to promote ocean incineration, especially in light of its own science advisory board's objections," says Rep. Boxer.

"Many experts believe that this technology has consequences that we have not been able to analyze," she adds. "If we are to protect our ocean environment and the California coastline, it's essential to delay burning at sea of toxic wastes."

EPA tentatively approved a test burn off the coast of New Jersey earlier this year, but then put off the project in response to public and congressional criticism for moving too fast.

Genex Files For Patents

Genex Corporation says it has filed patent applications relating to the design and production of novel, single-chain antibodies developed using the company's proprietary protein engineering technology.

Genex believes that, once widely available, single-chain antibodies may revolutionize the use of antibodies in diagnosis, therapy, sensing devices, and separations technology.

Conventional antibodies, including monoclonals, consist of four cross-linked protein chains. This 4-chain antibody structure includes two identical long chains, called heavy chains, and two identical short chains, called light chains.

Both the heavy and light chains contain a constant region, which is the same for all antibodies of a given class, and a variable region that binds a specific antigen and is therefore different for each antibody.

Genex's single-chain antibodies are hybrid molecules constructed by connecting specific sections of the light chain variable region and specific sections of the heavy chain variable region with short peptide linkers.

Using computer analysis, Genex scientists designed the length and composition of the peptide linkers as well as their site of attachment to the variable regions. Unlike conventional antibodies, single-chain antibodies are expected to be manufactured in genetically engineered micro-organisms.

US Fertilizers Score Victory On Ex-Im Loans

Congressional passage last week of a measure restricting Export-Import Bank loans to certain foreign competitors represents a major victory for the US economy, according to Gary D. Myers, president of The Fertilizer Institute, a key backer of the legislation.

An amendment to the congressionally approved Eximbank reauthorization package bars the use of Eximbank funds to establish or expand production of another nation's export commodities if such products are in world surplus, if they compete directly with similar US products, or if such loan assistance would cause substantial injury to US producers.

The language, referred to as the Byrd Amendment because of the strong support by Sen. Robert Byrd (D-W. Va.), is part of the Eximbank reauthorization bill awaiting President Reagan's signature.

Prior to final congressional passage, Sen. Byrd singled out the Fertilizer Institute as having provided convincing information about the damage to US industry of past Eximbank loans.

Mr. Myers praised the bill's passage, which he said is "good news for US phosphate producers." This industry segment has claimed large export sales declines due to Eximbank support of North African phosphate producers.

He said that $200 million in Eximbank loans to those producers from 1979 to 1985 equalled a single year's loss of $200 million in market share for US phosphate makers and a $450 million drop in domestic employment income.

"This amendment will help slow the damage done to our phosphate producers and their employees," Mr. Myers said.

The Fertilizer Institute represents, by voluntary membership, more than 90 percent of the nation's fertilizer industry. Producers, manufacturers, retailers, trading firms, and equipment manufacturers who comprise its membership are served by a full-time Washington, D.C., staff in various legislative, educational and technical areas, as well as with information and public relations programs.

Alachlor Wins Partial Reprieve But Is Limited

Environmental Protection Agency has decided not to suspend the use of alachlor, the nation's most widely used herbicide, but the agency last week proposed additional restrictions, including a requirement that use be limited to certified applicators and that new label modifications be made on the products.

EPA has been reconsidering its approval of alachlor, which is used to protect corn, soybeans, peanuts and other crops from weeds, because it has been found to cause cancer in laboratory test animals. The agency considers alachlor to be a potential human carcinogen.

Monsanto Chemical Company produces about 84 million pounds of the chemical, trade-named "Lasso," for US farm consumption annually.

A company spokesman says Monsanto is satisfied with the decision and adds that 75 percent of "Lasso" users are already certified. "We've said for two years that the special review would uphold the use of our product and it does that," he remarked.

PERFUMES & FLAVORINGS

Black Pepper Prices Firming As the World Market Tightens

Black pepper spot prices shot up across the board last week to $2.17 per pound. Predictions from a year ago of a tightening global market proved true as both the Indonesian and Brazilian crops registered smaller harvests.

"It's been a bullish market," says a spice broker. "Twelve to eighteen months ago a worldwide shortage was predicted by the major supplies in black pepper."

Also behind the higher prices, says a pepper importer, is the anticipation of even shorter supplies: "Buying has increased so that future contract requirements can be filled at present prices. Though prices are high, they're covering themselves in case they go higher."

All four major points of origin, Indonesia, Brazil, India and Malaysia, are in a seasonal rotation where each one will record a lower harvest.

Indonesia's late summer harvest totalled 8,000 tons, down from an annual average of 14,000 to 16,000 tons. In view of the shortage, says another spice broker, "the Indonesians are in no rush to sell the balance of their recent crop," hoping to hold out for higher prices later in the year.

The Brazilian harvest of August through October, reports a trade source, has been late, further tightening the market. A spice importer relates a climate similar to Indonesia's in Brazil: "Brazilian farmers also planted lower crops and are holding on to their material; they, too, are unwilling to sell it for a low price." "The farmers have more money than they did last year," adds an industry observer, "so they can afford to hold out longer." Crop estimates for Brazilian black pepper are from 20,000 ot 22,000 tons, compared to an average of 30,000 tons.

STRONG INDIAN CROP

India's upcoming harvest of December and January is expected to be a good one, ranging from 45,000 to 50,000 tons. It will be a decrease from India's record crop of last year, 65,000 tons, but well above the Indian average of 35,000 to 38,000 tons.

Yet another pepper importer contends a shortage of Indian material may emerge because of seasonal timing. "The old crop Indian black pepper has almost been exhausted," he says, "and the December/January harvest is a long way off."

A spice broker concurs, citing East European and Russian purchases of Indian black pepper: "India's position has been pushed up by steady sales to the Eastern bloc, on the order of 500 to 700 tons per week. Because the form of payment is less desireable to the Indians — credits for farm equipment and other machinery versus hard currency from the West — the price these nations pay is 2 percent to 10 percent higher, causing the Indian market to firm."

To complete the picture, the Malaysian Spring, 1986 crop was 15,000 tons, half of its yearly average of 30,000 tons. No precise estimates for Malaysia's 1987 crop were available, but sources agree that it ought to be larger than last Spring's.

The effect of this bullish market on US buyers, according to a pepper broker, is a more conservative approach to contracts. In contrast to two to three years ago, he says, "US buyers are less likely to book long positions because the price swings are too great. They now prefer to go hand-to-mouth and avoid a gambling loss."

Reviewing demand statistics from recent years, an industry analyst expects a Winter shortage: "The first few months of next year black pepper will be in very short supply."

A spice broker emphasizes that the pepper cycle insures availability and that the market can absorb any temporary shortage. "We should see this range — $1.90 to $2.50 per pound — through most of 1987."

In the long term, this broker sees the world black pepper farmers overcompensating for the shortage: "What will happen eventually is that in two years or so there will be an overabundance of pepper and the prices will come crashing down."

In contrast to the black pepper market, white pepper has been quiet, losing 2 cents last week to $2.98 per pound. Europe, the largest consumer market, has been inactive.

PRICES TRENDLINES

WEEK ENDING OCT. 3, 1986

CHANGES/UP

Anise seed, Spanish, 3-5c. per lb.
Anise seed, Turkish, 5c. per lb.
Cumin seed, Turkish, 3c. per lb.
Cumin seed oil, f.o.b. $20 per kilo
Dillweed oil, f.o.b. 10c. per kilo
Fennel seed, Turkish Fancy, 7c. per lb.
Mace, Padang siftings, 25c. per lb.
Nutmegs, East Indian Whole, 8c. per lb.
Nutmegs, West Indian Limed, 10-12c. per lb.
Poppy seed, Turkish, 1c. per lb.
Rosemary, Spanish/Portuguese, 2c. per lb.
Rosemary, Yugoslavian, 1c. per lb.
Sage, Albanian, 5c. per lb.
Sage, Turkish, 5-10c. per lb.
Thyme, Spanish, 7c. per lb.

CHANGES/DOWN

Caraway seed, Egyptian, 2c. per lb.
Cloveleaf Oil, Madagascan $3 per kilo
Cloves, Brazilian, 5-7c. per lb.
D-limonene, 25c. per kilo
Eucalyptus Citriadora Oil, Chinese, 5c. per kilo
Ginger, Cochin, 5c. per lb.
Mustard seed, Canadian 1-2c. per lb.
Orange Oil, Brazilian, 15c. per kilo
Patchouli Oil, f.o.b. 15c. per kilo
Petitgrain Oil, f.o.b. 25c. per kilo

PERFUMES INDEX

The Perfumes & Flavorings Index reflects the prices of 11 representative materials in this sector and the quantity of each supplied in 1985.

Oct. 3, 1986	71.00
Sept. 26, 1986	71.00
Sept. 5, 1986	71.00
Sept. 27, 1985	71.00

Chemical Prices Start on Page 40.

"Europe's inactivity has persisted for some time," says a pepper importer. Either stocks must be getting very low and they're holding out for lower prices, or they're decorticating the black pepper from Brazil into a reasonably good white pepper."

Decortication involves a weight loss of 8 to 10 percent and a fixed cost of about 15c. per pound. Considering the gap between the black and white spot prices, however, decortication can pay off. "The spread between the prices," says a pepper importer, makes it not only affordable but profitable to spend the extra money on decortication."

Brazil has scaled down the percentage of white it will harvest (CMR, 9/1/86), as has China. "Since the decision of how much of the crop will be white must be made early on in the harvesting process," says a spice broker, "growers cannot adjust until their next year's crop." The outlook for white pepper pricing ranges from steady to slipping.

ESSENTIAL OILS

CITRONELLA OIL — Indonesian citronella oil prices firmed over the last two weeks, up 20c. to $5.05 per kilo, cost and freight, New York. South American and Chinese prices are expected to firm as well.

Two primary factors have contributed to stronger prices: large, "good" sales by Chinese producers and a decline in the availability of Indonesian (Javan) citronella oil.

According to an essential oils broker, "the bulk of citronella oil coming to the US is from China." The Chinese sold the majority of their 1986 production in large lots, says an oils broker, "The material is still available to us, but mostly through European or Hong Kong resellers."

Large quantities of Javan material have

PERFUMES & FLAVORS

not reached the US market in light of both limited availability and competitive buying elsewhere: "The Javan citronella oil is going to Japan and Europe," says an importer, "because US buyers are notorious for seeking the lowest possible price."

India, another major producer of citronella oil, consumes much of its material, keeping it off the world market. "The Indians don't export very much of their material," observes a broker, "because they get better prices domestically. There is a traditional fascination with fragrance oils in India."

The Javan supplies have been restricted by the protraction of the harvesting process by unusually heavy rains. "The Javan citronella oil is short," says another broker, "thanks to many months of heavy rains. Production has been slowed."

Accordingly, Chinese producers have picked up the remainder of the market. "Also contributing," to firmer prices, says an essential oils dealer, "are reports that production is down in China, though it's difficult to tell to what degree." The Chinese have had such success with their citronella oil sales, trade sources say, that they are only taking orders for 1987 shipments.

A good indication of the citronella oil market's strength is the success of resellers. An increasing portion of the July/August imports coming from the Netherlands denotes a strong US demand a high price paid. "When buyers are short," an importer explains, "they will import the material from intermediary countries such as the Netherlands."

PATCHOULI OIL — Indonesian patchouli oil production will be stepped up in anticipation of increased demand, according to the Indonesian National Development Information Office. The government plans to double its acreage of 1,875 to 3,750 acres in 1987. Long term goals call for 6,750 acres harvested in 1988 and 8,750 acres in 1989. The figures have Indonesian patchouli oil as commanding 60 percent of the world market.

If such a policy were implemented, it would further weaken an already soft market. Indonesian patchouli oil imports have been steady while the Chinese material has lost a large portion of its market in the past two years. The Chinese market share has slipped from 40 percent to less than 20 percent of US imports in the past year.

"Chinese patchouli oil prices are coming down in an effort to meet the Indonesian levels," says an essential oils broker. But, he adds, it will be hard for them to recapture a market where their material isn't considered of comparable standard.

Current spot prices are Indonesian, $10.75 per pound, Chinese, $12.00 per pound. Import figures confirm that US demand is rising: 529,516 pounds imported from January through June, 1986 in comparison to the 1985 year-end total of 544,857.

But an essential oils dealer contends that the scale of increased production from Indonesia is too great, that the global and US markets wouldn't support it. "If the Indonesians do produce that much," he asks, "who would buy it?"

PINE NEEDLE OIL — Fir needle, or pine needle, oil prices continue to soften as usage decreases and aroma chemical substitutes for the oil become more widely used.

Imports have slowed in the face of an abundance of inventories in the US, down from a 1985 year-end total of 201,074 to a January through July figure of 19,958.

In the past two years, according to an importer, "a lot of the Chinese pine needle oil has been imported, yet very little of it is currently being used." Other major sources are the Soviet Union (Siberian), Canada, France and Austria.

Industry sources point out that import figures are distorted by the inclusion of aroma chemical substitutes such as isoeugenol acetate and "concoctions" composed of varying amounts of both synthetic and natural materials under the heading "pine needle oil".

"The import statistics are misleading," observes an oils broker, "for the market can not absorb these quantities," referring to the 1985 total of 201,074 pounds.

The trend to phase out natural pine needle oil began, according to an importer, "when toothpaste companies and scented candle producers, who used a substantial amount of it, weren't able to procure the Siberian oil and switched to the lower priced compounds. Some even took to making their own."

Canadian pine needle oil, considered a consistently pure natural oil, has suffered from these substitutions. Imports for 1983 totalled 16,542 kilos; for 1984, 13,387 kilos, and for 1985, 4,538 kilos. Canadian producers are also subject to high fixed costs of extraction and distillation, leaving their spot price at $10 per pound, double the Chinese spot quote of $5 per pound.

Siberian pine needle oil, also of high quality, faces the same impediments as the Canadian material. Its spot price is $12.75 per pound. "There has been a gradual reduction of imports of the better types of fir needle oil," says another importer.

A broker outlines an even bleaker picture for the essential oil: "The trend has been to cheaper pine needle oil or aroma chemical solutions, and perhaps toward doing away with the natural oil entirely."

HEAVY & AG CHEMICALS

Domestic Urea Producers Await Anti-Dumping Decision

Domestic urea producers, battered by low-priced imports and poor domestic demand, are looking to anti-dumping duties that the Commerce Department may levy against urea brought in from the Soviet Union, East Germany and Romania. Whether or not Commerce will assess duties and what their actual effectiveness would be are still up in the air.

In July, the Ad Hoc Committee of Domestic Nitrogen Producers filed an antidumping petition with the International Trade Commission (CMR, 7/21/86, pg. 3). ITC subsequently found that East European imports had caused probable material damage to US producers.

It is now up to Commerce to decide, by December 23 at the latest, if actual dumping has occurred and if an import duty should be levied. If Commerce rules in favor of US producers, then duties retroactive 90 days, to September 23, can be imposed.

In addition, the Ad Hoc Committee has petitioned for an expedited ruling, which could push the retroactive date before September 23.

Observers note that there has been some confusion over UAN solution shipments from Romania that have reportedly been mis-tabulated as urea imports. An Ad Hoc Committee spokesman says the matter is under investigation by Commerce but that it shouldn't have an effect on the ruling.

Some in the industry doubt that Commerce will decide on an import duty. The Ad Hoc Committee has filed similar petitions in the past without success.

SOVIET UREA

One observer points out that much of the Soviet urea is coming in as part of Occidental's 20-year fertilizer trade agreement with that country. Likewise, some of the other Eastern European material is said to be imported as part of grain barter agreements. Thus in both cases, an import duty could potentially jeopardize US exports, a fact Commerce is likely to take into account.

Others doubt that a successful suit would have an effect on import volume. Many involved take a "closed world" view of the matter and argue that Eastern European urea originally bound for the US will just end up in other countries, displacing product that will eventually find a home in the US. However, a successful suit might change importer urea prices for the better.

Producers say Gulf Coast prices for imported urea are currently averaging around $75 per ton, and can go as low as $70 per ton. While some quality differences are said to exist between domestic and foreign material, for the most part US producers must compete head to head with the imports, at prices that are keeping many of them in the red.

There had been talk that import prices would swing up after September 23, in anticipation of retroactive duties. This doesn't seem to be occurring, however, and high inventories along the Mississippi are being blamed.

One producer feels the only bright spot in the business is the precipitous drop in import shipments scheduled to arrive after September 23. He says scheduled shipments are down as much as 90 percent and feels that once the product already here gets flushed through the system, things may begin to pick up.

A thorough flush-through may take some time, however. A spokesman for the Ad Hoc Committee says that the 60 days proceeding September 23 saw two or three times the amount of imports that entered the US during the same period last year. Another source estimates that foreign shipments for the third quarter this year are about equal to volumes for the entire second half of last year.

The outlook for Fall fertilization is dim, as farmers are unsure about what government farm policies will dictate. Producers say there has been little movement to dealers in the Midwest. One source feels dealers are reluctant to commit to large purchases out of fear that prices will drop further.

One producer feels that Spring movement will be hampered by barge shortages.

PRICES TRENDLINES

WEEK ENDING OCT. 3, 1986

CHANGES/UP

Aluminum sulfate, $20 per ton
Hydrofluosilicic Acid, $50 per ton
Sulfur Dioxide, $10 per ton

CHANGES/DOWN

None

HEAVY & AG INDEX

The Heavy & Ag Chemicals index reflects the prices of 18 representative materials in this sector and the quantity of each produced in 1985.

Oct. 3, 1986	113.69
Sept. 26, 1986	113.69
Sept. 25, 1986	113.69
Oct. 4, 1985	113.69

Chemical Prices Start on Page 40

PRICE HIGHLIGHTS

INORGANICS IN SEPTEMBER

	SEPT. (US $)	AUG. (US $)
Ammonia, US Gulf, barges	70-75	75-80
Caustic Soda, US Gulf, railcars	80-90	80-90
Chlorine, US Gulf, tankcars	140-150	140-150
DAP, US Gulf, barges	130-132	130-132
Soda Ash, Green River, Wyo.	73-77	73-77
Sulfuric Acid, 98°, tankcars	55-60	55-60

Prices are in short tons and represent quotations for large buyers.

BASES & SALTS

ALUMINUM SULFATE — Delta Chemical Corporation announced last week that effective immediately, or as contract terms permit, its price structure for dry aluminum sulfate is being increased.

New distributor prices are as follows: standard ground purified aluminum sulfate in 100 pound bags, $205 per ton; in 50 pound bags, $215 per pound; in bulk, $195 per pound. Prices are f.o.b. Baltimore, Md., plus freight equalization with the closest producing facility, where applicable. Palletizing and stretch wrapping are included in the prices for 50 and 100 pound bags.

Delta says the increases reflect current manufacturing costs and increases in product liability insurance. Most dry aluminum sulfate producers have increased prices recently.

In another action, Stauffer Chemical Company says it will increase off list liquid aluminum sulfate (alum) prices by $8 per ton, effective October 8 or as contracts permit. Terms are f.o.b. Houston, Bastrop, La., Baton Rouge, La., Springhill, La., Conuce, Tenn., and Naheola, Ala.

SODIUM BICARBONATE — Church & Dwight Company says that it is increasing the price for all grades of sodium bicarbonate, effective November 1.

USP and industrial grades will increase by 50c. per hundredweight. New prices will be as follows: USP powder, $17.85 per hundredweight; coarse powder, $16.85 per hundredweight; fine powder, $17.75 per hundredweight; granular, $19.35 per hundredweight; fine granular, $18.10 per hundredweight.

In addition, reagent grade sodium bicarb-

HEAVY CHEMICALS

bonate will increase to $23.55 per hundredweight from $22.05; dialysate grade material will increase to $17.95 per hundredweight from $17.20.

Church & Dwight says the hike of approximately 3 percent is due to increases in the cost of raw material soda ash as well as increases in raw material freight costs. Also cited are rising costs related to packaging and labor.

SODIUM CHLORATE — ERCO, a division of Tenneco Canada Inc., is announcing a price increase for sodium chlorate from its North Vancouver, B.C. plant. The increases are effective immediately.

The new prices, in Canadian dollars, are as follows: sodium chlorate in bulk will be $560 per metric ton; sodium chlorate generator feed liquor, $543 per metric ton; R2/R3 solution, $543 per metric ton plus $50 per metric ton for added salt. All products are f.o.b. North Vancouver and freight equalized. These represent $20-per-metric-ton increases.

Pulp and Paper accounts will continue to receive a $20-per-metric-ton discount, bringing their prices to $540 for crystal and $523 for solutions.

Product in Flexible Intermediate Bulk Containers (FIBC's) and drums will also be increased by $20 per metric ton.

Last month, ERCO removed temporary voluntary allowances for crystal sodium chlorate shipped from its Buckingham, Quebec plant (CMR, 9/15/86, pg. 30).

VANADIUM OXYTRICHLORIDE — Stauffer Chemical Company says it is increasing the price of its vanadium oxytrichloride, effective November 1. Bulk shipments will move to $4.95 per pound from $4.55 per pound; product in cylinders will increase to $5.25 per pound from $4.75 per pound. Both prices are f.o.b. Weston, Mich.

Stauffer says the hike is necessary to cover increases in the cost of vanadium metal due to worldwide tightening of vanadium metal supplies. Foote mineral Company announced a similar increase earlier this year (CMR, 6/30/86, pg. 23).

Newmont Spinoff

Newmont Mining Corporation is spinning off 80 percent of its copper operations to shareholders. The company will retain a 15 percent interest in the new company, to be called Magma Copper Company, and the remaining 5 percent will be held by Magma management. The spinoff is expected to be completed in January.

EPA to Label Dow Pesticide A Cancer Threat

Environmental Protection Agency has begun a special review of the Dow Chemical Company pesticide 1,3-dichloropropene after determining that it has potential for producing tumors (oncogenicity) in humans.

Sold under the trade names "Telone II" and "Dow Telone," 1,3-dichloropropene is registered for use as a soil fumigant for cotton, potatoes, tobacco, sugar beets, grains, nut-trees, bush, vines and turf.

EPA has classified it as a probable human carcinogen and says available chronic toxicity data show that the chemical is oncogenic at multiple sites in both sexes of mice and rats.

According to the agency, other data show 1,3-dichloropropene to be a direct acting mutagen and to have a structural similarity to other known oncogens, such as vinyl chloride, that produce similar types of tumors in rats.

Based on its review of available data, EPA says it will require a cancer hazard warning statement on all product labels. The agency is also classifying 1,3-dichloropropene products for "restricted use" by certified applicators.

EPA says it believes that restricted use is necessary to protect mixers/loaders and applicators from exposure through inhalation.

Dow says it is not aware of any undue harm to the environment or humans as result of the pesticide's use, and adds that according to its data, the product achieves effective results with a minimum of risk. The company says it believes EPA's review will indicate that the benefits outweigh the risks of 1,3-dichloropropene's continued use.

EPA is continuing to require protective clothing and equipment specified on existing labeling. The types of protective clothing and equipment required include clean body covering, gloves, heavy-duty footwear, safety goggles and a mask or respirator approved for use with 1,3-dichloropropene.

The agency will require the protective clothing and equipment whenever high concentrations of vapors might be expected in mixing/loading or application.

EPA will continue to use the current reentry level of 72 hours until data are submitted to support a final interval. In most cases, the agency would set a reentry interval of 24 hours, during which time reentry into treated areas is prohibited without protective clothing. However, because 1,3-dichloropropene is extremely hazardous, the product is currently labeled with a 72-hour interval.

The agency is requiring environmental fate data, including a protocol for monitoring studies to determine the potential for groundwater contamination. Available data indicate that the chemical does leach to groundwater when it is present in areas with shallow groundwater, sandy soils of low percentage organic matter and high rainfall or irrigation.

EPA will not impose warning statements on product labels for non-target aquatic organisms and endangered species until the environmental fate data are received and reviewed. 1,3-dichloropropene is of low to moderate toxicity to waterfowl and upland game birds. It is moderately toxic to coldwater and warmwater fish and freshwater invertebrates.

While the data gaps are being filled, currently registered products containing 1,3-dichloropropene as the sole active ingredient may be sold, distributed, formulated and used subject to the conditions EPA has specified. Registrants must provide or agree to provide additional data to maintain existing registrations The agency will review and evaluate these data to determine if additional regulatory changes are necessary.

EPA also said that the risks associated with alachlor exposure through groundwater cannot be adequately addressed based on available data.

TOUGHER RESTRICTIONS

The agency's office of drinking water was in favor of tougher restrictions on the chemical's use, arguing that concentrations of alachlor as high as 580 parts per billion had been detected in some groundwater samples.

But in supporting the judgement of the office of pesticide programs, top EPA officials took the position that further monitoring will be needed before additional restrictions can be considered as a result of the chemical's widespread use and the lack of statistically representative data.

Currently, several groundwater and soil leaching studies are being conducted by Monsanto, various states, the Agriculture Department and the US Geological Survey.

"As a result," said EPA, "a decision on whether to regulate alachlor based on groundwater concerns will be delayed until the agency reaches a final position on the regulation of this product, expected in about one year."

The agency said its examination of monitoring data shows that the risk of cancer from alachlor levels in drinking water sources supplied by surface water will not generally exceed two persons in one million — an acceptable risk which does not merit regulation.

PROPOSAL PLANNED

EPA's Office of Drinking Water plans to propose a Maximum Contaminant Level (MCL) for alachlor under the Safe Drinking Water Act in the near future. These regulations would require the treatment of drinking water which contains alachlor residues in excess of the MCL, thereby maintaining the level of risk from exposure at a reasonable level

Some of the measured levels of alachlor may be higher than the MCL set by the agency, however. EPA is therefore soliciting public comment on measures which could be taken under FIFRA to reduce or prevent contamination of surface water by alachlor.

To reduce applicator risks to reasonable levels, the agency is proposing a number of conditions and label modifications to the alachlor registration: The product will be limited to certified applicators or persons under their direct supervision; aerial applications may be reinstated on the alachlor label with the proviso that human flaggers be prohibited and that only mechanical flaggers may be used; the use of a closed mixing/loading system is required for all applicators who treat 300 acres or more annually with alachlor.

The following statements must appear on alachlor product labels: "Restricted use due to oncogenicity"; "the use of this product may be hazardous to your health" and "this product contains alachlor which has been determined to cause tumors in laboratory animals."

Chemical Pricing

Continued from Page p 7

cents per pound September 1, and are doing so again one month later. Strong worldwide demand for polystyrene is said to be providing support for the higher pricing. With operating rates approaching 90 percent, producers say the market has become considerably tighter than might have been expected a year ago, and that profitability has been returning to the industry.

Cumene pricing has firmed from 13½ cents per pound in mid-Summer to 14¾ cents per pound in September, with some suppliers reportedly aiming at 15 cents per pound or higher in October. This movement prompted phenol producers to schedule a 2-cent-per-pound price increase for October 1.

Margins have reportedly been weak in the phenol business for much of the year, and a price initiative at the beginning of the third quarter did not succeed. Although demand from the phenolic resin end market has not reflected the level of housing construction this year, producers are hopeful that a healthy rate of growth for bisphenol-A will provide support for this month's price increase.

CYCLOHEXANE PRICES

Cyclohexane producers are raising prices 1 cent per pound October 1. The change involves a reduction of the industrywide temporary voluntary allowance, which, when granted last year at the behest of the nylon industry, was 4 cents per gallon, and now ranges from 1 cent to 2 cents per gallon. Producers say that demand is healthy, and that, with the August shutdown of E.I. du Pont de Nemours & Co.'s Corpus Christi, Tex., plant for the balance of the year, inventory levels are modest.

Phthalic anhydride producers this month are raising prices by 1 cent to 2 cents per pound for both molten and flake material, citing high feedstock ortho-xylene costs and the need to improve margins. With all major end markets said to be strong, and with a vigorous demand for exports, the product is seen as fairly tight. A 2-cent-per-pound price increase was successful at the beginning of the third quarter.

The key word in aliphatics prices this year, as in all major organic chemicals, is oil. Sharply lower crude oil prices at the beginning of the year sent purchasing agents scurrying for their share of lower raw material costs. Sellers are now trying to increase and/or stabilize prices on the strength of a moderate increase in crude oil pricing from its sub-ten dollar-per-barrel low to approximately $15 per barrel.

Ethylene prices have been revived from the 13 cent per pound low in July to a current level of 14 cents per pound. This has been achieved through strong demand, balanced supply and an insistence by producers that higher feed costs over the past six months have to be passed along.

In addition, ethylene suppliers are hoping to add as much as 2 cents per pound to current levels during October. As in the past, suppliers are optimistic about higher prices at the start of each quarter. However, oversupply and strong competition for customers has tended to disappoint most sellers. The fourth quarter of 1986 is measurably different, though. Supply and demand are in closer balance than they have been since the late 1970's and the October initiative comes on the heels of a small but significant advance during September.

Strong demand for polyethylene this year has also made propylene producers more adamant about seeking price increases.

Ethylene glycol has finished its major buying season for antifreeze raw materials in September with pricing of 16½ cents per pound and producers are looking for a 2-cent-per-pound hike for October 1. Buyers waited until the last minute to order their antifreeze materials. However, once it seemed likely that a price hike would be successful, most dealers put in their bid for product.

Butadiene has not benefited from stronger oil values and remains under pressure from imports and oversupply. Prices during the year dropped by about 60 percent and material traded at 11½ cents per pound during October.

Methanol has also born the brunt of lower energy prices as feedstock natural gas has to compete with liquid fuel. Gulf Coast material lost 3 cents to 4 cents per gallon during the quarter, but the outlook is for more stable pricing. Methanol values on the Gulf Coast now make it more difficult for overseas producers to market their material profitably in the US.

Producers of commodity plastics, facing strong demand and, with firming crude and petrochemical values, a more receptive pricing environment, are now trying to restore the profitability which faded with crude oil rates over the first half of the year. Virtually all major plastics producers announced price hikes for the fourth quarter.

LDPE pricing and demand eroded over the second quarter, as customers either held back on purchases, waiting for further drops in crude oil costs, or demanded passthroughs of lower crude costs. A 5-cent-per-pound price increase, effective August 1, has gotten off to a slow start, but is expected to hold. HDPE prices, which slipped 3 to 4 percent over the second quarter due to competitive pricing and customer pressure, have started to firm. Producers feel that the 4-cent-per-pound increase effective October 1 has excellent chances, given high demand and production rates.

POLYSTYRENE DEMAND

Molding and extrusion demand for polystyrene took off through June of this year, exceeding even the most optimistic forecasts. July's 2-to-3-cent-per-pound price increase was successful, but profit margins in the industry are still too thin to support continued high production rates and future expansions. Given strong packaging demand and higher styrene monomer costs, producers are optimistic that an October increase of 3 cents per pound will succeed in restoring health to the year's margins.

Meanwhile, a more prominent and competitively-priced export segment has transformed the domestic polylpropylene market. Exports shot up dramatically over last year's levels and are expected to remain high. Prices in this traditionally low-profit segment are currently exceeding domestic rates in certain segments. A 2-to-3-cent-per-pound October increase is expected to bring domestic prices into line. Producers feel it should hold, given almost full capacity utilization and the need for expansion to satisfy anticipated demand.

PVC resin makers have reinstated June price increases of 2 cents per pound, with one producer granting customers a TVA for the month of October. Though prices had firmed through June and July, they fell the full 2 cents per pound through August and September. Given low interest rates and a healthy construction industry, demand for the resin has been strong; the hikes will be needed if high production rates are to continue, and profitability to be regained.

After a long period of price erosion and competitive discounting, aggravated by imports and depressed crude oil values, epoxy resin prices may be on the rise. Two of the four major US producers hiked commodity grades by 2 to 4 cents per pound October 1. Discounts, which have affected the market for the past year, are said to be drying up, and import levels, decreasing.

After eroding by 10 percent through the second quarter of this year, phenolic resin prices may be increasing. Higher phenol costs have already prompted one major producer to effect 1-to-4-cent-per-pound price increases, effective October 15. High construction rates have been reflected in higher demand for many grades of resin, but demand for some industrial grades has suffered.

Responding to higher environmental compliance and labor costs, as well as tight raw material supplies, some pigment producers have also implemented fourth quarter price increases.

With shrinking feedstock supplies and full-out production rates, TiO2 producers have raised tabs for the pigment by 2 to 4 cents per pound. Sweeping expansions of raw material and pigment capacity are planned by 1987, but, currently, expansions are taking the form of individual debottlenecking projects.

Following zinc metal prices, zinc oxide tabs will also move up 3 cents per pound in October.

CADMIUM PIGMENTS

Demand for cadmium pigments has been strong, due to increased use by makers of specialty engineering plastics. Several producers raised prices 2 percent this September.

In contrast, carbon black prices are still depressed, although feedstock tabs seem to be on the rise.

Likewise, iron oxide prices are said to be 10 percent lower than they were last year. Imports, which played a role in depressing domestic prices, seem to be waning, however. Magnetic grade production, which had moved almost entirely offshore, has returned to the US, as one major producer reopened a mothballed plant this summer.

Some semblance of profitability may finally return to the beleaguered US plasticizer industry: producers of phthalate adipate and other plasticizers hiked off-list prices by 2 cents per pound in July to combat price erosion and 15 to 20 percent increases in raw material costs.

INORGANIC CHEMICALS

For the most part, inorganic chemicals sufffered in the third quarter, with fertilizers leading the way downhill. A few items managed to tick upwards, however.

Caustic soda continued its price slide during the quarter, and a July 1 price hike was virtually ignored by purchasers. Chlorine continued to carry the weight of the E.C.U. and gained about $10 in July.

All producers have announced October 1 $30-per-ton hikes on caustic soda alone. Most observers feel caustic has bottomed out for the year and that much of the increase will be implemented.

Chlorine is being left out of the October initiative, but, observers say, chlorine prices have stayed firm since the July hike. Continued strength in the construction industry takes the credit for this.

Gulf coast prices for ammonia and urea are currently less than one-half their 1985 peak. Similarly, ammonium phosphate prices are, for most producers, below cash cost.

Phosphate producers are getting some relief as the export market is beginning to pick up, but nitrogen makers, inundated by Eastern European imports, have little to look forward to. An anti-dumping suit may offer some relief (see page 33).

A few items are managing gains. Sulfur dioxide producers have announced $10 per ton hikes for October 1. The advance should go through, most feel, as it is the first in over two years.

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CD Polycarbonate

Continued from Page 9

million pounds, a spokesman for the firm reports. Mobay is currently the sole commercial supplier of resin to the joint venture, although all domestic polycarbonate producers have been working in conjunction with the firm on product development.

Although Mobay claims that its new plant will be the largest commercial facility in the US capable of producing CD-grade polycarbonates on a large-scale basis, all domestic producers, realizing the tremendous potential of this market segment, are currently involved in production.

General Electric's Plastics Group started commercial production of a competitive polycarbonate line, "Lexon" OQ, in the last quarter of 1985 at its Mount Vernon, Ind., polycarbonate facility, while Dow Chemical Company says it began commercial production of CD-quality "Caliber" polycarbonate resin at its Freeport, Tex., plant in July 1986.

RAPID MARKET GROWTH

The market for this grade of resin is expected to grow rapidly, as optical disk applications gain greater acceptance worldwide.

Total US CD-grade polycarbonate resin production is projected by one producer to move from its current level of about 300,000 pounds per year to between 20 and 50 million pounds per year in 1990.

Manufacture of CD's is expected to increase eightfold through 1990. Five million disks were produced in the US last year, and a capacity for 450 to 500 million disks is projected by 1990. Worldwide capacity by that time should be 1 billion disks per year.

As Mark Hindal, optical disk program specialist for G.E.'s Plastics Group explains, growth in this portion of the market will be pushed not only by audio CD's and read-only memory disks, but also by interactive storage disks, introduced by Sony and Philips this February. Each individual disk will combine video, audio and computer data and, used in applications such as multimedia encyclopedias.

Currently, compact audio disks are progressing the most rapidly as a market entity. Although acceptance of read-only storage disks and interactive disks will probably lag behind audio CD's by 4 to 5 years, producers feel that as magnetic tape data systems are replaced by this new technology, they will probably become the most important of the optical disk market segments by the late 1990's. Triple digit growth for these two market segments is expected through 1990.

Polycarbonate demand for audio applications should grow at an average rate of 20 percent annually through 1990. By that time, producers anticipate that domestic requirements will be entirely satisfied by US polycarbonate resin manufacturers.

Some data processing firms switched from magnetic to optical disk data storage systems this year. In July, Filenet Corporation, a leading producer of storage and retrieval units, designed and marketed a disk unit using a glass-reinforced, PTFE-lubricated polycarbonate blend compounded by Thermofil Engineering Thermoplastics Inc.

Although a spokesman for Philips & Du Pont Optical Company indicated that the firm was experimenting with different clear thermoplastics for possible future use in optical disk manufacturing, ultra-pure polycarbonate is the current material of choice, specified in the Phillips licensing package.

The optical disk market is only one of many high growth segments within the healthy polycarbonate market, which is expected to grow 8 percent annually through 1990. Another high growth area is the production of *composites and alloys* to be used as metal replacements in structural automotive and industrial applications.

Last year, domestic demand for polycarbonate totaled 292 million pounds.

Dow's Freeport, Tex. plant came on line on the second quarter of last year. G.E. plans to have a new "Lexan" polycarbonate plant facility on line in Burkville, Ala., by early 1987.

PRICES TRENDLINES

WEEK ENDING OCT. 3, 1986

CHANGES/UP
None

CHANGES/DOWN
None

COATINGS INDEX

The Coatings & Plastics index reflects the prices of 13 representative materials in this sector and the quantity of each produced in 1985.

Oct. 3, 1986	306.4
Sept. 26, 1986	306.4
Sept. 5, 1986	306.4
Oct. 4, 1985	306.4

Chemical Prices Start on Page 40

PLASTICS MATERIALS

EPOXY RESINS — Shell Chemical Company, the largest US producer of commodity epoxy resins, is increasing non-contract selling prices for its "Epon" liquid and solid epoxy resin lines, effective October 1. Contract prices will be raised on November 1.

The increase moves prices for liquid "Epon" resins up 4c. per pound, and those for solid lines up 3c. per pound.

Similar increases were announced by Dow

Continued on Page 57

COATING & PIGMENT IMPORTS: JULY

CENSUS BUREAU REPORTS ON THE TOP PAINT MATERIALS.

		JULY 1986		JUNE 1986	
		QUANTITY	$ VALUE	QUANTITY	$ VALUE
Antimony oxide	lbs.	2,804,117	2,516,844	3,462,861	2,831,769
Carbon black	lbs.	10,019,857	2,760,861	6,536,395	2,459,031
Chrome colors:					
Chrome oxide green	lbs.	563,016	542,758	666,561	599,697
Molybdate orange	lbs.	202,456	218,447	146,459	145,017
Yellow	lbs.	392,313	264,495	360,587	263,063
Zinc Yellow	lbs.	283,203	174,848	260,998	166,172
Cobalt Oxide	lbs.	1,900	55,795	9,947	64,622
Cuprous Oxide	lbs.	128,184	101,528	80,000	70,133
Iron blues	lbs.	413,800	533,939	279,660	343,690
Iron oxides, hydroxides, nat'l	lbs	82,050	17,765	84,200	6,043
Synthetic:					
Black	lbs.	400,266	117,035	294,834	83,416
Red	lbs.	1,049,626	263,097	879,764	243,139
Yellow	lbs.	3,067,990	691,966	1,787,731	353,357
NSPF	lbs.	1,650,414	1,034,651	1,564,943	1,206,167
Litharge	lbs.	2,635,476	546,022	1,403,800	248,278
Red Lead	lbs.	94,000	21,128	44,000	9,020
Shellacs, bleached	lbs.	123,265	334,063	207,917	172,174
Stick buttonlac, other lacs	lbs.	171,969	249,534	142,859	259,223
Seed lac	lbs.	290,384	265,844	238,377	393,850
Titanium dioxide	lbs.	36,542,570	21,275,249	36,941,268	[illegible]
Ultramarine blues	lbs.	876,717	863,164	883,145	[illegible]
White lead, basic carbonate	lbs.	N/A	N/A	378,105	113,656
Zinc Oxide (lead free)	lbs.	11,088,609	3,466,686	5,461,146	1,756,429

CHEMICAL PRICES

WEEK ENDING OCT 3, 1986

This chemical prices section contains spot quotations and/or list prices of suppliers of chemicals and related materials on a New York or other indicated basis. The listings are based on price information obtained from suppliers. Note that posted prices do not necessarily represent levels at which transactions actually may have occurred. They do not represent bid and asked prices, nor a range of prices over the week. Price ranges may represent quotations of different suppliers as well as differences in quantity, quality and location. All matters under this heading are fully covered by copyright.

An index of weekly chemical market reports is on the back cover.

A

Abies siberica oil, cns. ... lb.	15.00	–
Acetaldehyde, 99%, tanks, frt. alld. lb.	.37	–
Prices 1c. higher in West.		
Acetaminophen (see N-Acetyl-p-aminophenol)		
Acetanilide, tech, flaked, bgs, t.l., f.o.b. works ... lb.	1.29	–
Acetic acid, tech., tanks, divd. E ... lb.	.25	–
Acetic anhydride, tanks, divd. E ... lb.	.43½	–
Acetic anhydride prices 1c. higher in West.		
Acetoacetanilide, dms., t.l., divd. ... lb.	1.29	–
Acetoacet-o-anisidide, dms., t.l., divd. ... lb.	2.70	–
Acetoacet-o-chloroanilide, dms., t.l., divd. ... lb.	2.85	–
Acetoacet-o-toluidide, dms., t.l., divd. ... lb.	1.58	–
Acetoacet-m-xylidide, dms., t.l., divd. ... lb.	3.33	–
Acetone, tanks, divd. E. ... lb.	.25	–
divd. Zone 2 (Calif.) ... lb.	.27	–
divd. Zone 3 (W. of Rockies excluding Calif.) ... lb.	.27	–
Acetonitrile, tanks, frt. alld. ... lb.	.53	.54½
Acetophenetidin (see Phenacetin).		
Acetophenone, tech., tanks, f.o.b. works ... lb.	.76	.85
perfume grade, extra, cns. ... lb.	2.15	–
N-Acetyl-p-aminophenol, c.l., t.l. works ... kilo	5.95	6.64
Acetylene black, imp., 50% compressed, 12½-lb. bgs. c.l., t.l. frt. extra ... lb.	.96	–
100%, 25-lb. bgs., same basis ... lb.	.95½	–
Acetylene tetrabromide, tanks, f.o.b. works ... lb.	.97	–
Acetylsalicylic acid, USP (see Aspirin).		
Acetyltributyl citrate, bulk, f.o.b. works ... lb.	1.28	–
Acetyltriethyl citrate, bulk, f.o.b. works ... lb.	2.08	–
Acrolein, tech., tanks, works ... lb.	.82	–
Acrylamide, solid, t.l. works ... lb.	1.00	–
soln., 100% basis tanks, works ... lb.	.74	.77
Acrylic acid, glacial, reg., tanks, divd ... lb.	.67	–
tech., tanks, frt. alld. ... lb.	.60	–
Acrylonitrile, tanks, works ... lb.	.39½	.45½
Acrylonitrile-butadiene-styrene resin, high-impact, nat., t.l., dms., divd. ... lb.	1.09	1.12
medium-impact, nat., same basis lb.	1.05	1.08
low-impact, nat., same basis ... lb.	.98	1.01
Adipic acid, resin grade, bulk, hopper cars, frt. equald. ... lb.	.57	–
bgs., t.l., c.l. frt. equald. ... lb.	.59	–
Agar USP, powd., 60 to 100 mesh., dms. ... lb.	9.50	9.85
Alcohol, syn. C-8 to C-10, tanks, f.o.b. works ... lb.	.38	–
C-12 to C-13, tanks, divd. ... lb.	.57	.59
C-14 to C-15, tanks, divd. ... lb.	.57	–
C-16 to C-18, tanks, divd. ... lb.	.60	–
Aldehyde, C-6, dms. ... lb.	4.10	5.70
C-7, dms. ... lb.	1.95	–
C-8, dms. ... lb.	4.30	6.30
C-10 dms. ... lb.	4.30	6.35
Algin (see Sodium alginate.)		
Alkali blue, dry, flushed, 110-lb. dms, divd. ... lb.	3.72	3.83
Alkali blue prices 1c. higher W. of Rockies.		
Allspice Guatemalan / Honduran, bgs. ... lb.	.87	–
Jamaican, bgs. ... lb.	1.05	–
Allyl alcohol, tanks, f.o.b., Bayport, Tex. ... lb.	.90	–
Allyl bromide, 500-kilo dms. 2,000 lbs. or more, works ... lb.	5.50	–
Allyl caproate, 25-lb. cns. ... lb.	3.90	4.50
Allyl chloride, tanks, f.o.b. works ... lb.	.65	–
Allyl isothiocyanate, bots. ... lb.	5.40	6.90
Almond oil, artif., bitter (see Benzaldehyde.)		
Almond oil, nat. bitter, NF f.f.p.a. bots. ... lb.	3.50	3.60
sweet ... lb.	1.24	1.50
Aloe, Cape, cs. ... lb.	2.00	–
powd., cs. ... lb.	2.25	2.75
Curacao, kgs. ... lb.	2.80	–
powd., kgs. ... lb.	3.00	–
Aloin, NF, dms. ... lb.	6.00	6.70
Alum, ammonium, tech. gran., bgs., c.l., t.l., works ... 100 lb.	35.00	–
FCC powd., fiber dms., works 100lbs.	55.00	–
Alum, potassium, tech. gran. bgs., c.l., t.l., works ... 100 lbs.	35.00	–
FCC powd. fiber dms., works . 100 lbs.	55.00	–
Alumina, activated, gran., 100-lb. bgs., 40,000-lb. min. c.l., works. ton	821.00	–
calcined, bulk, same basis ... ton	354.00	–
100-lb. bgs., same basis ... ton	380.00	–
hydrated, white, bulk, same basis ... ton	190.00	–
100-lb. bgs., same basis ... ton	224.00	–
Aluminum acetate, basic, dms., l.c.l., works ... lb.	3.25	–
Aluminum chloride, anhyd., soln., 500-600 lb. dms., c.l., t.l., works, frt. equald. ... lb.	.53	–
bulk, same basis ... lb.	.48	–
semi-bulk bins, same basis ... lb.	.52	–
Aluminum chloride, coml., soln., 32° tanks, works ... 100 lbs.	15.00	–
ret. dms., c.l., works ... 100 lbs.	12.00	–
non-ret. dms., same basis . 100 lbs.	20.00	–
Aluminum formate, dibasic, liq. 8% Al_2O_3 t.l., works ... lb.	.55	–
Aluminum hydrate (see Alumina, hydrated)		
Aluminum hydroxide, dried, gel, NF, 75-lb. dms., c.l., t.l., works. lb.	2.75	3.50
Aluminum metal, 99½% or more, 50-lb. pigs., 30,000-lb. lots, frt. alld. ... lb.	.76	–
Aluminum oxide amorphous (see Alumina, calcined).		
Aluminum paste, leafing grade, std., lining, 2,400 lb. lots, divd. ... lb.	1.40	–
lining, extra-fine, same basis ... lb.	1.99	2.14
Aluminum phenolsulfonate, purif., 100-kilo dms., t.l. ... kilo	6.46	–
Aluminum powder, leafing grade, std. lining, 2,400 lb. lots, divd. . lb.	3.17	–
extra fine, lining, same basis ... lb.	4.04	–
Aluminum stearate, bgs., c.l. ... lb.	1.25	1.37
Aluminum sulfate, coml., grd., 100 lb. bgs., c.l., works, frt. equald., basis 17% Al_2O_3 East and Gulf Coasts ... ton	205.00	–
West Coast ... ton	220.80	–
liq., tanks, N.E. same basis ... ton	145.00	–
Iron-free, dry, bgs., c.l. same basis ... ton	300.00	–
liq., tanks, same basis ... ton	225.00	265.00
Aluminum sulfate, USP, gran., dms. lb.	–	.337
Aminoacetic acid, USP, dms., 20,000 lbs., f.o.b. works ... lb.	2.12	–
tech., t.l., same basis ... lb.	1.98	–
p-Aminobenzoic acid, 1,000 kilos or more, dms., f.o.b. works . kilo	9.60	10.10
2-Amino-4-chlorophenol dry and grd., 14,000 lbs. or more, frt. alld. lb.	5.79	–
Aminoethyl ethanolamine, tanks, frt. collect ... lb.	1.33½	–
N-Aminoethyl piperazine, tanks, f.o.b., frt. collect ... lb.	1.05	–
2-Amino-2-ethyl-1,3-propanediol dms., t.l. f.o.b. works ... lb.	1.82	–
2-Amino-2-methyl-1-propanol, 95%, dms., c.l., t.l., f.o.b. works . lb.	.95	–
tanks, f.o.b. works ... lb.	.89	–
o-Aminophenol, dms., f.o.b. Charlotte, N.C. ... lb.	3.95	–
p-Aminophenol, t.l. dms., f.o.b. Raleigh, N.C. ... kilo	7.15	–
p-Aminosalicylic acid, USP, 50-kilo dms., t.l. ... kilo	18.50	–
Ammonia, anhyd., fertilizer, wholesale, tanks, divd. Midwest terminals ... ton	165.00	170.00
tankcars, f.o.b. Gulf Coast ... ton	80.00	85.00
aqueous, 29.4% NH_3, anhyd. basis, tanks, frt. equald. E. of Rockies ... ton	260.00	315.00
Ammoniacal liquor (see Ammonia, aqueous).		
Ammoniac sal, galvanizing grade, bgs., c.l., f.o.b. works ... 100lbs	28.60	–
Ammoniac sal. white (see Ammonium chloride coml.)		
Ammonium biborate, gran., dms., c.l. works ... lb.	.90	–
Ammonium biborate powder 15c. per lb. higher.		
Ammonium bicarbonate, 300-lb. fib. dms., c.l., works ... 100 lbs.	26.00	–
bgs., c.l. ... 100 lbs.	25.00	–
Ammonium bichromate, photo-litho grade, gran. 100-lb. dms., l.t.l. works ... lb.	2.00	–
Ammonium bifluoride, bgs., t.l., works ... lb.	.70	–
Ammonium bromide, dom. NF, gran., dms., c.l., t.l., f.o.b. works . lb.	1.31	–
Ammonium chloride, white, tech., fine gran., bgs., c.l., works ... 100lbs.	18.00	–
USP, gran., dms. ... lb.	.40	.53
Ammonium citrate, dibasic, 250-lb. dms. f.o.b. works ... lb.	2.79	–
Ammonium dimolybdate, approx. 85%, 24,000 lbs. or more . lb.	5.48	–
Ammonium fluoborate, tech., dms., c.l., t.l., works, frt. equald. . lb.	1.79	–
Ammonium heptamolybdate, cryst., dms., 24,000 lbs. f.o.b. works ... lb.	5.57	–
Ammonium lauryl sulfate, tanks, f.o.b. works ... lb.	.29	.32
Ammonium lignin, sulfonate, bulk, f.o.b. Hoquiam, Ore. ... ton	72.00	–
Ammonium nitrate, dom., fertilizer grade, 33.5% N, bulk, S.E. divd. ... ton	130.00	135.00
Ammonium oxalate, tech., fine gran. 300-lb. dms., t.l., f.o.b. works ... lb.	1.42	1.68
Ammonium pentaborate gran. bgs., c.l., works ... lb.	.75	–
Ammonium pentaborate powder 20c. per lb. higher.		
Ammonium persulfate, 225-lb. dms, 24,000 lbs. or more, f.o.b. works ... lb.	.58	–
55-lb. bgs., same basis ... lb.	.56½	–
Ammonium phosphate (see Di- and monoammonium phosphates).		
Ammonium silicofluoride, dms. c.l., t.l., works ... lb.	.30¾	–
Ammonium sulfate, lg. gran., bulk, c.l., works ... ton	80.00	90.00
std., coml., bulk, f.o.b. works .. ton	60.00	70.00
tech., bgs., c.l., t.l., works ... ton	108.00	120.00
Ammonium sulfide, liq., 40-44% tanks, 100% basis, frt. equald. .ton.	460.00	–
Ammonium sulfocyanide, tech. (see Ammonium thiocyanate).		
Ammonium thiocyanate, tech., cryst., bgs., c.l., works ... lb.	1.02	–
tech soln., 50%, tanks, frt. equald. ... lb.	.93	–
Ammonium thiosulfate, photographic, 60%, tanks, f.o.b. works .. lb.	.13	–
Ammonium zirconyl carbonate, soln., bulk ... lb.	.72	–
Amyl acetate, primary mixed isomers, tanks, divd. ... lb.	.57	–
Amyl alcohol, primary mixed isomers, tanks, frt. alld. ... lb.	.46½	–
Amylcinnamic aldehyde, dms. ... lb.	2.35	2.50
p-tert-Amylphenol, bulk, works ... lb.	.91	1.03
Amyris oil, dms. ... lb.	11.50	12.25
Anethole, tech., dms. ... kilo	10.20	–
USP, dms. ... lb.	3.65	4.60
Angelica root oil, bots. ... kilo	700.00	–
Aniline, tanks, f.o.b. ... lb.	.33	.35½
Anise oil, dms. ... kilo	11.75	–
Anise seed, Egypt. bgs ... lb.	.63	–
Spanish, bgs ... lb.	1.08	1.10
Turkish, bgs ... lb.	.95	.98
Anisic aldehyde, cns., dms ... lb.	4.80	5.40
o-Anisidine, imp., dms., divd. ... lb.	2.27	–
p-Anisidine, imp., cast solid, dms., works ... lb.	1.90	–
flakes, same basis ... lb.	2.25	–
Anthranilic acid, purif., 99% min., dms., t.l., frt. alld. ... lb.	1.70	–
Antimony fluoborate, liq. conc., 175-lb. dms., t.l., works ... lb.	3.02	–
Antimony metal, bulk, c.l., mines ... lb.	1.35	1.39
Antimony oxide, high-tint, bgs., c.l., frt. alld. E. of Rockies ... lb.	1.35	1.50
Antimony trichloride, anhyd, solid, dms., t.l. works ... lb.	3.60	–
Apomorphine hydrochloride, NF, bots. ... gm.	15.00	–
Apricot kernel oil, dms ... lb.	2.05	–
Arabic gum, powd., bbls. ... lb.	1.85	2.15
spray dried ... lb.	2.00	2.50
USP grade ... lb.	6.75	9.25
Aromatic petroleum solvents (see Solvent, naphtha, petroleum, aromatic).		
Arsenic, crude (see Arsenious trioxide).		
Arylid, red (see Napthol, arylid red).		
Arsenious trioxide, 99%, bulk, c.l., f.o.b. warehouse ... lb.	.42	.45
Asbestine (see Talc, fibrous).		
Ascorbic acid, USP, 100 kilos, divd. ... kilo.	9.00	10.50
Ash, black (see Barium sulfide).		
Asphalt gilsonite, (see Gilsonite).		
Asphalt petroleum cutback, tanks, E. Coast. ... gal.	.86	–
emulsion, tanks, tankwagons, E. Coast ... gal.	.68	–
steam-refined, 40-300 penetration, tanks, tankwagon ... ton	170.00	–
steep roofing grade, bulk tankwagon ... ton	175.00	–
Aspirin, USP, cryst., powd., 250-lb. dms., c.l., f.o.b. ... lb.	1.95	–
10% starch granulation, white, 250-lb. dm, c.l., f.o.b. ... lb.	1.97	–
16% starch granulation, white, same basis ... lb.	2.80	–
Freight equald. shipt. identical quantity over standard routes from N.Y., Phila., Midland, Mich., Chicago and St. Louis.		
Atropine sulfate, USP, bots ... oz.	10.00	11.00
Avocado oil, dms. ... lb.	4.00	4.50
Azelaic acid, tech., 50-lb. bgs., t.l., c.l., divd. ... lb.	1.23	–
Azo orange, bbls., divd. ... lb.	4.60	–
Azo yellow, 10 G, bgs., divd. E. of Rockies ... lb.	4.40	–
Azo G yellow pigment, bgs., same basis ... lb.	2.45	–

B

Bacitracin, USP, non-sterile, one billion units or more ... million units	6.30	6.60
Barbital, NF, 50-kilo dms., divd. .. kilo	22.50	–
Barbital-sodium, NF, 50-kilo dms. divd. ... kilo	23.00	–
Barite, dry-grd., Southern, off-color, coarse, bgs., c.l., f.o.b. mines lb.	.09	.11
water-grd., white, bgs., c.l., f.o.b. works ... lb.	.13	–
unbleached, extra-fine, pigment grade, c.l., f.o.b. works .. ton	160.00	–
Barium carbonate, precip., bulk, c.l., works, frt. equald. ... lb.	.25	–
bgs., same basis ... lb.	.25½	–
photo grade, bgs., same basis ton	510.00	–
Barium chlorate, 100-lb. dms., 1-10 dm. lots, works ... lb.	1.04	–
Barium chloride, tech., cryst., bgs., c.l., works ... ton	470.00	–
anhyd. drums c.l., same basis. ton	590.00	–
Barium chloride, purif., cryst. 400-lb. dms., works ... lb.	3.76	–
Barium monohydrate, 55-lb. bgs., c.l., t.l. f.o.b. works ... 100 lbs.	46.00	–
octahydrate, cryst., bgs., same basis ... 100 lbs.	33.00	–
Barium nitrate, 100-lb. bgs., t.l., works ... 100 lbs.	32.50	–
Barium oxide, grd., dms., c.l., divd. ... 100 lbs.	31.25	–
tote bins, same basis. .. 100 lbs.	30.00	–
Barium peroxide, 700-lb. dms., c.l., t.l., works ... lb.	.30	–
Barium stearate, bulk, t.l., f.o.b. dest. ... lb.	1.05	–
Barium sulfate, tech. (see Barite and Blanc fixe).		
Barium sulfate, USP, X-ray diagnosis grade, powd., 25 kilo bgs., 10,000 kilo lots ... lb.	.58½	–
Barium sulfide (black ash), dms., c.l., works ... ton	460.00	–
Basil Egyptian ... lb.	.75	.85
French ... lb.	.88	.90
Basil oil, Comores ... lb.	90.00	–
Basil oil, Grand Vert ... lb.	45.00	–
Battery acid, t.l., f.o.b., works ... ton	62.00	70.75
Bauxite, calcined, refractory grade, 87¾-88% Al_2O_3, Baltimore & Mobile ... metric-ton	229.28	–
Bay oil, NF, 55-60%, dms. ... lb.	10.50	15.00
Bayberry wax, bgs. ... lb.	2.70	3.00
Beeswax, refd., bleached white, bricks, 100-lb. ctns. ... lb.	3.10	3.20
white, slabs, 100-lb. ctns. ... lb.	3.05	3.10
yellow, bricks, 100-lb. ctns. ... lb.	3.00	3.10
yellow, slabs, 100-lb. ctns. ... lb.	2.95	3.05
Bentonite, dom., c.l. bags, f.o.b. works ... ton	43.50	–
Benzaldehyde, NF, dms. ... lb.	1.25	–
tech., dms., c.l., t.l. ... lb.	.73	.83
Prices are 4c. per lb. higher West of the Rockies.		
Benzene, indust. or nitration, barges, f.o.b.		
Baton Rouge, La. ... gal.	.85	–
Baytown, Tex. ... gal.	.85	–
Beaumont, Tex. ... gal.	.85	–
Catlettsburg, Ky. ... gal.	.85	–
Chicago district ... gal.	.86	–
Chocolate Bayou, Tex. ... gal.	.85	–
Clairton, Pa. ... gal.	.85	–
Corpus Christi, Tex. ... gal.	.86	–
Deer Park, Tex. ... gal.	.85	–
Houston district, spot ... gal.	.81	.82
Lima, Ohio ... gal.	.85	–
Wood River, Ill. ... gal.	.86	–
Benzene hexachloride, 99% gamma isomer (see Lindane).		
Benzidine orange, powd., bgs., divd. lb.	4.90	6.70
liq., containers, divd. ... lb.	3.38	3.89
Benzidine yellow, AAA, bgs., divd. . lb.	5.80	6.05
AAOA, bgs., divd. ... lb.	7.35	7.40
AAOT, bgs., divd. ... lb.	5.95	6.20
Benzocaine, USP, dms., 1,000 kg. lots, f.o.b. works ... kg.	10.00	11.50
Benzodihydropyrone, dms. ... lb.	12.50	–
Benzoic acid, tech., bgs., c.l., t.l., f.o.b. works ... lb.	.55	.58
USP cryst., dms., ton lots same basis ... lb.	1.73	1.75
Benzoin gum, Sumatra, cs. ... lb.	1.80	–
Benzophenone, N.F., 1,000 lbs. or more, f.o.b. ... lb.	3.50	3.60
N.F., 1,000 kilos or more, f.o.b. ... kg.	7.45	–
tech, 1,000 kilos or more, fob works ... kgs.	4.35	–
2,2-Benzothiazyl disulfide (see Mercaptobenzothiazyl disulfide).		
Benzotriazole, flake, dms., 1,000 lbs. or more, f.o.b. works ... lb.	6.10	–
powd., dms., 1,000 lbs. or more, same basis ... lb.	6.20	–
photo-grade, dms., 1,000 lbs. or more, same basis ... lb.	9.90	–
Benzotrichloride, refd., dms. t.l., frt. equald ... lb.	.87	–
tanks, frt. equald ... lb.	.80	–
Benzoyl chloride dms., c.l., works .. lb.	.57	.59
tanks, frt. equald. ... lb.	.74½	.75
Benzoyl peroxide, regular gran., 10,000-lb. lots or more, bgs., works, frt. equald. ... lb.	2.35	6.98
paste, 50% and 55% formulations, dms., pails, frt. equald. ... lb.	1.71	1.95
Benzyl acetate, dms. ... lb.	1.20	2.60
Benzyl alcohol, N.F. t.l. dms. frt. equald ... lb.	1.26	1.85
tanks, same basis ...	1.37	1.43
photo grade, t.l., dms., same basis ... lb.	1.40	–
tanks, same basis ...	1.34	–
tech. grade, t.l., dms., same basis lb.	1.32	–
tanks, same basis ...	1.26	–
Benzyl benzoate, dms. ... lb.	1.65	2.25
Benzyl chloride, tech., non-ret. dms., c.l., t.l., frt. equald ... lb.	.59	–
tanks, f.o.b. ... lb.	.54	–
Benzyl cinnamate, 25-lb. cns. ... lb.	8.50	9.95
n-Benzyl-N,N-dimethylamine, t.l., dms., f.o.b. works ... lb.	2.30	–
Benzyl formate, dms. ... lb.	10.50	–
6-tert-Butyl-m-cresol (see Mono-tert-butyl-m-cresol).		
Benzyl isoeugenol, dms. ... lb.	15.50	–
Benzyl propionate, dms. ... lb.	3.35	–
Benzyl salicylate ... lb.	2.90	3.25
Benzylidine acetone, cns., bots ... lb.	2.95	3.25
Bergamot oil, nat., Italian, f.o.b. .. kilo	44.00	–
Betahydroxynaphthoic acid (see b-Oxynaphthoic acid).		
Biotin, cryst., 500 gms. or more ... gm.	5.50	–
Biphenyl (see Diphenyl).		
Bismuth nitrate, purif. cryst., 100-lb. dms., frt. equald. ... lb.	10.00	–
Bismuth oxychloride, 100-lb. dms., works ... lb.	17.20	–
Bismuth subcarbonate, USP, medium powd., 225-lb. dms., works. lb.	15.31	15.50
Bismuth subgallate, purif., 100-lb. dms., works ... lb.	10.50	–
Bismuth subnitrate NF, powd., 200-lb. dms., works ... lb.	14.45	–
Bismuth subsalicylate, purif. powd., 50-100 lb. dms., works ... lb.	17.00	–
Bismuth trioxide, reagent. powd., 100-lb. dms., works ... lb.	15.00	15.45
Bisphenol-A, epoxy grade, hopper cars, divd. ... lb.	.67	–
polycarbonate grade, same basis lb.	.71	–
Blanc fixe, syn., imp., bags ... lb.	.20	–
Bois de rose oil, Braz., dms. ... lb.	10.75	12.00
Peruvian, dms. ... lb.	10.75	–
BON toner (red 48) dms., frt. alld. .. lb.	7.25	8.05
(red 52) dms., same basis ... lb.	6.50	7.90
Bonemeal, steamed, dom., bgs., c.l., f.o.b. Midwest plants ... ton	180.00	190.00
Bone phosphate, defluorinated of lime, (see Defluorinated phosphate).		
Bone phosphate, precip. (see Calcium phosphate tribasic).		
Borax, tech. anhyd. 99%, bgs., c.l., works ... ton	647.00	–
bulk, c.l., works ... ton	602.00	–
Borax, tech., gran., decahydrate, 99½% bgs., c.l., works .. ton	237.00	–
bulk, c.l., works ... ton	192.00	–
tech., pentahydrate, gran. 99½%, bgs., c.l., works ... ton	265.00	–
bulk, c.l., works ... ton	220.00	–
Borax, NF (See Sodium borate).		
Boric acid, tech., gran., 99.9%, bgs., c.l., works ... ton	614.00	–
bulk, c.l., works ... ton	569.00	–
Boron trichloride, CP, 1,800-lb. cyls., works ... lb.	3.80	–
Boron trifluoride, 60-lb. cyls., t.l., f.o.b. works ... lb.	4.03	–
bulk, same basis ... lb.	3.47	–
Boron trifluoride, etherate, 500-lb. dms., t.l., f.o.b., works ... lb.	2.35	–
phenolate, 500-lb. dms., t.l., same basis ... lb.	1.65	–
Bromine, dms., t.l., works ... lb.	.87	–
bulk, 45,000-lb. min., works ... lb.	.33	.34½
purif., t.l., divd. ... lb.	.75	–
Bromine divd., prices for dms. and bulk shipped W. of Rockies, 1c.-per-lb. higher. Bulk t.t. prices 1c. to 2½c.-per-lb. higher for 30,000-lb. min. and 4c. to 5½c.-per-lb. higher for 15,000-lb. min.		
Bromochloromethane, dms., c.l., f.o.b. Midland ... lb.	1.12	–
Midland ... lb.	1.12	–
Butadiene, tanks, f.o.b. ... lb.	.12½	.13
equald. ... lb.	.80	–
dms., same basis ... lb.	.88	–
Butene-1, tanks, f.o.b. works ... lb.	.26	.28
n-Butyl acetate, syn., tanks, frt. alld. lb.	.52½	–
n-Butyl acrylate, tanks, frt. alld. E. ... lb.	.69	–
n-Butyl alcohol, syn., ferment, tanks, frt. alld ... lb.	.34	–
sec-Butyl alcohol, syn., tanks, divd. lb.	.365	–
tert-Butyl alcohol, syn., tanks, divd. E. ... lb.	.70	–
Butyl aldehyde (see Butyraldehyde)		
Butyl benzyl phthalate, tanks, frt. alld. ... lb.	.59	–
Butyl chloride, tanks, works ... lb.	.99	1.00
Butyl cyclohexyl phthalate, tanks, divd ... lb.	.74	–
n-Butyl ether, dms., c.l., t.l., works .. lb.	1.85	–
Butyl isodecyl phthalate, tanks, divd ... lb.	.35	–
n-Butyl lactate, tanks, f.o.b. works . lb.	1.58	–
n-Butyllithium, 15% soln., 1,000-lb. lots or more, cyls., 100% basis, divd. ... lb.	15.45	–
tanks, 3,000-lb. min., 100% basis, divd. ... lb.	14.75	–
Butyl methacrylate, tanks, frt. equald. ... lb.	.88	–
Butyl octyl phthalate, tanks, divd E. ... lb.	.40	.42
Butyl oleate, dist., dms., c.l. ... lb	.70	.82
tanks ... lb	.60	.75
p-tert-Butylphenol, tanks works .. lb.	.70	–
Butyl phthalate (see Dibutyl phthalate).		
Butyl stearate cosmetic, dms., 77 dms or more ... lb	.91	.97
tanks ... lb.	.92	–
Butyl stearate tech., t.l. ... lb.	.60	.62
tanks ... lb.	.55	.58
Butylamine (see Mono-, Di- and Tributylamine).		
tert-Butylamine, dms., c.l., t.l., f.o.b. works ... lb.	1.31	–
tanks, same basis ... lb.	1.17	–
Butylated hydroxyanisole, food grade, dms., divd. ... lb.	8.80	8.85
Butylated hydroxytoluene, food, feed grades, c.l., t.l., bgs., divd. . lb.	1.24	1.30
tech., bgs., c.l., t.l., divd. ... lb.	1.24	1.30
1,3-Butylene glycol, tanks, divd ... lb.	.72	–
Butyraldehyde, tanks, divd. ... lb.	.29½	.38
Butyric acid, tanks, frt. alld. ... lb.	.44½	–
Butyric ether (see Ethyl butyrate).		
Butyrolactone, tanks, f.o.b. plant ... lb.	1.20	–
n-Butyronitrile, dms., c.l., divd. ... lb.	.93	–
tanks, divd. ... lb.	.54	–

ABBREVIATIONS

THE TERMINOLOGY OF THE CHEMICAL MARKETPLACE

a/alpha
alld./allowed
amorph./amorphous
AMP/American melting point
anhyd./anhydrous
AOAC/Association of Official Agricultural Chemists
a.p.a./available phosphoric acid
approx./approximately
artif./artificial
ASTM/American Society for Testing & Materials

b/beta
Be/Baume
bbls./barrels
b.g./beta-gamma
bgs./bags
bls./bales
bots./bottles
b.p./boiling point
b.p.l./bone phosphate of lime
b.r./boiling range
bxs./boxes

C./Centigrade
cbys./carboys
c.c./cubic centimeters
CD/completely denatured
c.i.f./cost insurance freight
c.l./carload
cns./cans
coml./commercial
conc./concentrated
cp/chemically pure
cps./centipoises
cryst./crystalline
cs./cases
ctns./cartons
cyls./cylinders

d-/dextro
dbl./double
denat./denatured
dest.-dist./destructively distilled
dl/dextro-laevo
dist./distilled
distr./distributor
divd./delivered
dms./drums
dom./domestic

E/East
e.p./end point
equald./equalized
exp./expressed
extr./extracted

F./Fahrenheit
f.a.s./free alongside
ferment./fermentation
f.f.a./free fatty acid
f.f.c./free from chlorine
f.f.p.a./free from prussic acid
fib./fiber
f.o.b./free on board
f.p./freezing point
frt./freight

g-/gamma
gal./gallon
g.p./general purpose
gran./granular
grd./ground

i.b.p/initial boiling point
imp./imported

incl./included
indust./industrial

kgs./kegs

l-/laevo
lb./pound
l.c.l./less carload
l.t.l./less truckload
liq./liquid

m-/meta
m.a.p./mixed aniline point
mcg./microgram
mfrs./manufacturers
min./minimum
molt./molten
m.p./melting point

N/nitrogen
n-/normal
nat./natural
neut./neutral
NF/National Formulary
No./number
Nom./nominal

o-/ortho
ord./ordinary
oz./ounce

P/phosphorus
p-/para
Pac./Pacific
pf./proof
phos./phosphate
photo/photographic
pkgs./packages
powd./powdered
precip./precipitated
prod./producer
pt./point
pulv./pulverized
purif./purified

redist./redistilled
refd./refined
refy./refinery
resub./resublimed
ret./returnable

SD/specially denatured
s.d./single distilled
SE/Southeast
sec./secondary

secs./seconds
sp.g./specific gravity
ship't/shipment
soln./solution
std./standard
syn./synthetic

tanks/railroad tankcars
tech./technical
tert./tertiary
t.l./truckload
ton/refers to short ton of 2,000 pounds
TVA/temporary voluntary allowance
t.w./tankwagons

USP/United States Pharmacopeia

vis./viscosity
VM&P/varnish makers & painters

W/West
whse./warehouse
w.w./water-white

NOTE: A unit-ton is 1 percent of 2,000 pounds of the basic constituent or other standard of the material. The percentage figure of the basic constituent multiplied by the unit-ton price shown in Chemical Marketing Reporter gives the price of 2,000 pounds of the material.

C

Cadmium chloride, purif. cryst., 100-lb. dms., t.l., works ... lb.	3.73	–
Cadmium, CP, red, dark shade, bbls., 100-lb. lots, frt. alld., E. of Rockies ... lb.	11.33	16.38
light shade, bbls., same basis ... lb.	9.16	12.06
medium shade, bbls., same basis. lb.	10.69	15.20
medium-light shade, bbls., same basis ... lb.	10.26	14.60
Cadmium, CP yellow, all shades, bbls., 100-lb. lots, frt. alld., E. of Rockies ... lb.	6.10	7.07
Cadmium fluoborate, liq. conc., dms., t.l., works, frt. equald. ... lb.	2.27	–
medium-light shade, bbls., same basis ... lb.	3.22	–
Cadmium-mercury lithopone, maroon shade, bbls., frt. alld. E. of Rockies ... lb.	4.60	–
Cadmium metal ingots or sticks, ton lots, cs., divd. ... lb.	1.20	1.50
Cadmium nitrate, purif., flake 400-lb. dms., c.l., t.l., f.o.b. ship. pt. lb.	2.10	–
Cadmium-selenide-lithopone, orange, light shade, bbls., 400-lb. lots, frt. alld. E. of Rockies ... lb.	3.97	4.00
deep shade, bbls., same basis ... lb.	4.47	4.50
Cadmium-selenide lithopone, red, dark shade, bbls., same basis .. lb.	6.77	6.80
light shade, bbls., same basis ... lb.	5.27	5.30
medium light shade, bbls., same basis ... lb.	5.72	5.75
medium shade, bbls., same basis. lb.	6.37	6.40
maroon shade, bbls., same basis. lb.	7.47	–
Cadmium-selenide lithopone, yellow, all shades, bbls., same basis. . lb.	2.97	3.00
Cadmium sulfate, 50-lb. dms., any quantity, f.o.b. ship. pt. ... lb.	4.05	–
Caffeine, dom., USP, syn. cryst. anhyd., powd., 100-lb. dms., c.l., t.l., frt. alld. ... lb.	4.80	–
imp., cryst., anhyd., powd., dms., 10,000 lbs. or more ... lb.	4.70	4.85
Calamine, USP, dms. ... lb.	1.60	1.70
Calamus oil, dms. ... lb.	28.60	35.00
Calciferol, (see Ergocalciferol).		
Calcium acetate, purif., powd., dms., t.l., works ... lb.	.67	–
Calcium carbide, std., generator size, bulk, c.l., f.o.b., works ... ton	402.00	–
Calcium carbonate, pulverized, 325-mesh, bgs., bulk, f.o.b. works ... ton	46.00	–
slurries, 54% solids, same basis ... ton	1.77	–
72% solids, same basis ... ton	109.27	–
quicklime, gran., ind., bulk, works ... ton	100.93	–
Calcium carbonate, coated, bgs., c.l., works ... lb.	.0830	.1600
Calcium carbonate, precip., bgs., cl, t.l. ... ton	365.00	445.00
Calcium carbonate precip. medium, bgs., c.l., works. ... ton	110.00	150.00
precip. dense. bgs., c.l., surface treated, bgs., c.l., works.. ton	265.00	–
ultrafine, USP, bgs., c.l., works ... ton	217.00	225.00
Calcium chloride, conc., reg. grade. 77-80%, flake, bulk, c.l., works ... ton	153.00	–
100-lb. bgs., c.l., same basis ... ton	196.00	–
anhyd., 94-97%, flake or pellet, bulk, c.l., same basis ... ton	217.00	–
80-lb. bgs., c.l., same basis ... ton	279.00	–
brining grade, 80-lb. bags ... ton	285.00	–
Calcium chloride, liq., 100 percent basis, t.c., t.l., barge ... ton	99.75	–
45% same basis ... ton	118.00	–
Calcium chloride, USP, gran., 225-lb. dms., t.l., frt. equald. ... lb.	.90	–
Calcium citrate, purif., 200-lb. dms., 10,000 lbs. or more, f.o.b. works ... lb.	3.82	–
Calcium cyanamide, indust., anhyd. dms., works ... ton	400.00	450.00
Calcium gluconate, USP powd. t.l. . lb.	1.80	–
Calcium hydride, lump, dms., 25-1,000-lb. lots. works ... lb.	10.50	13.25
Calcium hypochlorite, 100-lb. dms., truckloads ship, t. E. of Rockies ... 100 lbs.	92.40	–
Calcium hypophosphite, dms., bulk, 500 kilos or more ... kilo	13.75	14.50
Calcium iodate, FCC dms., f.o.b. works ... lb.	5.50	–
Calcium iodide, 50-kilo dms., f.o.b. works ... kilo	23.65	25.65
Calcium lactate, NF, powd., pentahydrate, dms., 24,000 lbs. or more, f.o.b. works ... lb.	2.00	–
NF, gran., trihydrate, same basis. lb.	2.10	–
special gran., dried grade, same basis ... lb	2.80	–
Calcium naphthenate, liq., 4% Ca., c.l., f.o.b. plant, E. of Rockies. lb.	.85	–
d-Calcium pantothenate, USP, 100-500-kilo lots ... kilo	11.50	12.50
dl-Calcium pantothenate, feed grade, f.o.b. frt. alld., 250 kilos or more ... kilo	8.00	8.50
dl-Calcium pantothenate, calcium chloride complex, feed grade, 160 grams per lb., f.o.b., frt. alld., 500 lbs or more ... lb.	2.75	–
Calcium phosphate, dibasic, feed grade, 18½% P. bulk, c.l., t.l., f.o.b. works ... ton	228.00	–
Calcium phosphate, dibasic, dihydrate, USP, bgs., c.l., t.l., works, frt. equald. ... 100 lbs.	62.50	–
anhyd., USP, same basis. . 100 lbs.	71.75	–
dentifrice grade, same basis. .100 lbs.	49.90	–
Calcium phosphate, monobasic, monohydrate, food grade, bgs., c.l., t.l., works, frt. equald. ... 100 lbs.	50.50	–
anhyd., food grade, same basis ... 100 lbs.	54.95	–
tribasic, NF precip., bgs., c.l., frt. equald. ... 100 lbs.	62.50	–
Calcium propionate, dms., 2,000 lbs. or more f.o.b. frt. alld. ... lb.	.50	.55
Calcium silicate, hydrated, bgs., c.l., works ... lb.	.07	–
Calcium silicate, paint grade (see Wollastonite).		
Calomel, NF, mild powd., 100-lb. dms., f.o.b. works ... lb.	8.50	–
Camphene chlorinated, 67-69% (see Toxaphene).		
Camphor, monobromated, dms., kgs. ... lb.	3.63	3.70
Camphor, syn., tech., 165-lb. dms., 5,000 lbs. or more ... lb.	1.80	–
USP, powd., 165-lb. dms., 5,000 lb. lots or more ... lb.	2.36	–
syn., refd., 1-oz. tablets, ctns. 1,000-lb. lots or more ... lb.	3.50	–
Camphor oil, yellow, 25-lb. dms ... lb.	2.50	–
white, dms. ... lb.	1.50	–
spec. grav., 1.070, dms. ... lb.	2.00	2.25
Cananga oil, Indonesian, dms. ... kilo	17.00	–
Candelilla wax, crude, bgs. ... lb.	1.90	–
refd. pure, bgs. ... lb.	2.10	–
Capric acid, coml, pure, dms. ... lb.	.60	.65
tanks ... lb.	.60	.66
Capric aldehyde (aldehyde C-10) dms., cns. ... lb.	3.95	5.35
Caprolactam monomer, flake, bgs., t.l., f.o.b. shipping point ... lb.	.87	–
molten, tanks, same basis ... lb.	.85	–
Capryl alcohol sec. 92-99% tanks, f.o.b. works ... lb.	.35	–
Caprylic acid, coml. pure tanks ... lb.	.73½	–
Capsicum (see Pepper, red).		
Capsicum oil (see Capsicum oleoresin).		
Capsicum oleoresin, NF, from dom. pepper, dms. ... lb.	11.00	–
NF, from African pepper, dms. 500,000 pungency ... lb.	9.00	–
1,000,000 pungency ... lb.	17.00	18.00
Caraway oil, Poland, dms. ... lb.	22.00	25.00
Caraway seed, Dutch, bgs ... lb.	.58	.59
Egyptian, bgs. ... lb.	.50	.53
Carbon black, furnace, fast extruding, (FEF), bulk, c.l., works ... lb.	.2125	–
bgs., c.l., works ... lb.	.2425	–
general purpose (GPF), bulk, c.l., works ... lb.	.2075	–
bgs., c.l. works ... lb.	.2375	–
high abrasion (HAF), high structure, bulk, c.l. works ... lb.	.2300	–
bgs., c.l., works ... lb.	.2600	–

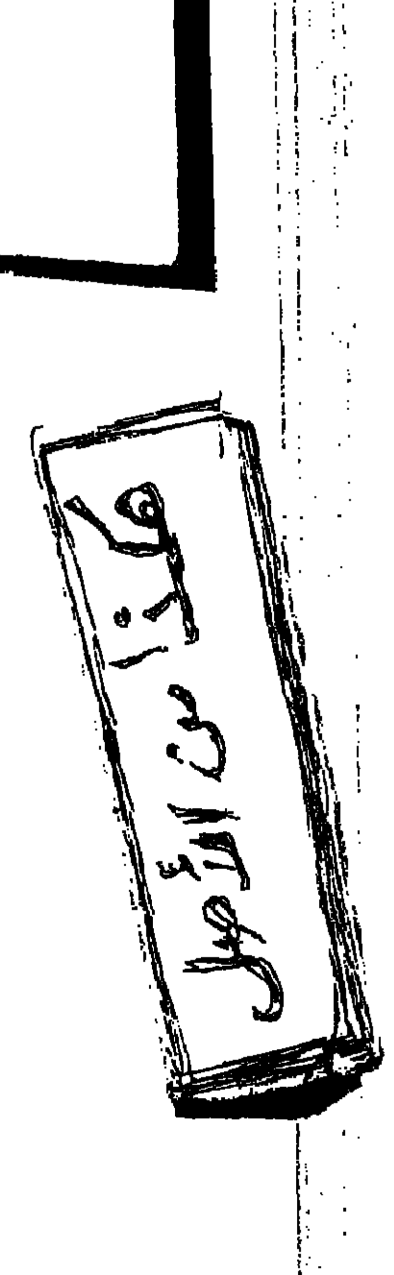
CHEMICAL PRICES

WEEK ENDING OCT 3, 1986

Carbon Black, low structure, bulk, c.l. works ... lb.	.240	.260
bags, c.l. works ... lb.	.270	.290
intermediate-super-abrasion (ISAF) ... lb.	.25	–
bgs., c.l. works ... lb.	.28	–
super-abrasion (SAF), bulk, c.l., works ... lb.	.31	–
bgs., c.l., works ... lb.	.4080	–
semi-reinforcing (SRF), bulk, c.l., works ... lb.	.210	–
bgs., c.l., works ... lb.	.240	–
Carbon black, thermal, medium, bgs. c.l., works ... lb.	.30	.30½
bulk, c.l. works ... lb.	.32	.34½
Carbon black oil, barge, f.o.b. Gulf refineries ... bbls.	10.50	12.50
f.o.b. W. coast refineries ... bbls.	10.50	12.50
Carbon disulfide, t.c., f.o.b. works ton	420.00	–
Carbon tetrachloride, CP, consumers, dms., c.l., frt. alld. ... lb.	.36	–
tech., dms., c.l., t.l., frt. alld. ... lb.	.31	–
tank transport (min. 4,000 gals.) frt. alld. ... lb.	.24	–
Carboxymethyl cellulose (see CMC).		
Cardamom oil, NF, bots. ... lb.	75.00	100.00
Cardamoms, decort, Guatemalan. . lb.	3.00	–
green, Guatemalan, bgs. ... lb.	8.25	9.75
Carmine, No. 40, NF, bulk, 100-lb. lots or more, divd. ... lb.	135.00	140.00
Carnauba wax, Parnahyba, No. 1, yellow, bgs., ton lots ... lb.	1.95	2.05
Ceara, No. 1, yellow, bgs., ton lots. ... lb.	1.75	1.90
North Country, No. 2, refined, bgs., ton lots ... lb.	1.55	1.65
Carnauba wax, North Country No 3, centrifuged, bgs., ton lots . lb	1.10	–
North Country, No 3, refined, bgs., ton lots ... lb.	1.30	1.45
Powdered carnauba wax, 20 to 100 mesh, 20c. per lb. higher.		
b-Carotene, in vegetable oil, semi-solid suspension, 400,000 A units per gram, 33 lbs or more . lb.	32.75	–
b-Carotene, liq. in vegetable oil, 500,000 A units per gram., 33 lbs or more ... lb.	40.75	–
b-Carotene, dry, beads, 10%, 167,000 A units per gram 50-lb cns lb.	26.85	–
d-Carvone, 25-lb. dms, syn. ... lb.	48.00	–
l-Carvone ... lb.	7.00	7.25
Cascara sagrada bark, bulk ... lb	1.00	–
Casein, imp., acid-precip., grd., 30-mesh, Australian, edible, same basis. c.i.f. ... lb.	1.45	–
Australian, indust., same basis c.i.f. ... lb.	1.365	–
Cassella acid, 303 mol. wt., dms., frt. alld., 100% basis ... lb.	3.70	–
Cassia, Korintji "A" bgs. ... lb.	.95	1.05
"B" bgs. ... lb.	.72	.78
Castor oil, raw, No. 1, Braz. tanks. . lb.	.31	.31½
USP 5-9 dms. ... lb.	.74	–
refd. deod., 5-9 dms. ... lb.	.78	–
blown, 5-9 dms. ... lb.	.75	–
dehydrated, bodied, tanks ... lb.	.74	–
dehydrated, unbodied, tanks ... lb.	.65	–
Castor oil, acids dehydrated, dms. . lb.	1.10	–
ricinoleic acid ... lb.	.78½	.83
Castor pomace, bgs., container load, f.o.b., Miami, Fla. ... ton	154.00	–
Castoreum, nat., cns. ... lb.	18.00	35.00
syn., cns. ... lb.	11.00	–
Catechol, CP, 45-kilo dms., 50-239 dms., f.o.b. ... kilo.	7.93	–
tech., bgs., t.l., same basis ... kilo.	3.71	–
Caustic potash (see Potash, caustic).		
Caustic soda (see Soda, caustic).		
Cedarleaf oil, dms. ... lb.	17.50	–
Cedarwood oil, Texas, dms., cns. .. lb.	3.50	4.00
Virginia ... lb.	3.70	4.20
Cedrol, prime dms. ... lb.	5.25	–
Cedryl acetate, dist., dms. ... lb.	4.25	5.30
Celery seed, Indian, bgs. ... lb.	.48	–
Celery seed oil ... lb.	50.00	63.00
Cellulose acetate, powd., bgs., t.l., divd. E. ... lb.	1.30	–
Cellulose acetate butyrate, powd., 17% butyl content, bgs., t.l., divd. E. ... lb.	1.75	–
38% butyl content, bgs., divd. E. . lb.	1.59	–
50% butyl content, bgs., divd. E. . lb.	1.81	–
55% butyl content, bgs., divd. E. . lb.	1.63	–
Cellulose gum, pure, high vis., bgs., 24,000-lb. lots or more works, f.o.b. Hopewell, Va. ... lb.	1.60	1.70
std., low or medium vis., bgs., c.l., t.l., f.o.b. Hopewell, Va. ... lb.	1.60	1.90
Cerium concentrate CeO_2, 50 lbs. .. lb.	1.38	–
Cerium hydroxide 90% CeO_2, dms., works ... lb.	5.40	–
77% CeO_2, dms., works ... lb.	4.20	1.60
Cerium oxide, optical grade, bgs., 50-lb. lots or more, divd. ... lb.	1.85	1.90
Cetyl alcohol, NF, cns., c.l., t.l., divd. E. lb.	.68½	1.27
Chalk (see Calcium carbonate).		
Chamomile flowers, Hungarian, cs. . lb.	4.25	4.50
Roman, cs. ... lb.	4.94	–
Egyptian, whole ... lb.	2.70	3.00
Chamomile oil, blue, Egyptian ... lb.	845.00	–
blue, Hungarian ... lb.	370.90	–
Chenopodium oil, NF, cns. ... lb.	15.00	–
Chicago acid, dry, bbls., frt. alld. ... lb.	13.50	–
Chilies (see Pepper, red).		
Chlorendic anhydride, tech., dms., t.l., works ... lb.	1.30	–
Chlorinated paraffin, 40% chlorine, bulk, divd., Zone 1 ... lb.	.46	.46½
50% chlorine, same basis ... lb.	.46	.47½
60% chlorine, same basis ... lb.	.46½	.48½
70% chlorine, resinous, 50-lb. bgs., c.l., divd., Zone 1 ... lb.	.69	–

CHEMICAL PRICES

WEEK ENDING OCT 3, 1986



Chlorinated paraffin, Zone 2 prices are 1c. per lb. higher and Zone 3 prices are 2c per lb. higher and t.l. drum prices are 5c per lb. higher		
Chlorinated rubber, 5, 10, 20 cps., bgs, t.l., divd. .... lb.	1.68	-
40 cps, bgs., t.l., divd. .... lb.	1.92	-
125 cps., bgs., t.l., divd .... lb.	2.60	-
300 cps., bgs., t.l., divd .... lb.	2.75	-
Chlorine, tanks single units works, f.o.b., frt. equald .... ton	195.00	200.00
Chloroacetic acid, mono, high purity, flake, 99% bulk f.o.b. works .... lb.	.56	-
2-Chloro-4-aminotoluene, tech., liq., dms., c.l., t.l., f.o.b. works. lb.	1.88	-
o-Chloroaniline, liquid, dms., c.l., f.o.b. works .... lb.	1.63	-
tanks, same basis .... lb.	1.55	-
p-Chloroaniline, solid, c.l., t.l., f.o.b. lb.	1.70	-
flake, dms., c.l., same basis .... lb.	2.00	-
o-Chlorobenzaldehyde, dms., t.l., works .... lb.	2.45	-
p-Chlorobenzaldehyde, dms., 2,000 lbs. or more, works .... lb.	3.84	3.85
o-Chlorobenzoic acid, dms. l.t.l. wks. . lb.	3.90	-
p-Chlorobenzoic acid, dms., 500-lb. lots or more, works .... lb.	1.69	2.25
Chloroform, tech. tanks, distr. divd. ... lb.	.34½	-
tech., consumers, tanks, divd. ... lb.	.34½	-
NF tanks, min., consumer, 4,000 gals. divd. .... lb.	.35½	-
2-Chloro-4-nitroaniline, paste, commodity basis, dms., t.l., f.o.b. .... lb.	3.06	-
powd., same basis .... lb.	3.15	-
4-Chloro-2-nitroaniline, paste, 172.5 mol. wt., commodity basis, dms., t.l., f.o.b. .... lb.	2.25	-
powd., same basis .... lb.	2.70	-
o-Chlorophenol, dms., c.l., frt. equald .... lb.	2.00	2.40
p-Chlorophenol, dms., c.l., frt. equald .... lb.	1.25	1.70
Chloropicrin, coml., 1,500-lb. cyls., t.l., f.o.b. works .... lb.	1.25	-
Chlorosulfonic acid, tanks, frt. equald .... lb.	.18½	-
p-Chlorotoluene, tech., tanks, works .... lb.	1.00	-
Cholecalciferol, dry, 40,000,000 units per gram, kilo lots .... gm.	24.00	-
Choline bitartrate, cryst., 98% min., 50 kilo dms., f.o.b. Springfield, Mo. .... kilo.	6.90	-
Choline chloride, feed grade, 70% aqueous, t.c., t.t., divd. E of Rockies .... lb.	.28	-
60% dry supplement .... lb.	.39	-
Choline chloride, 60% dry supplement, bulk hopper cars .... lb.	.39	-
bgs. 50,000 lbs. min. .... lb.	.40	-
Choline chloride, pharmaceutical, 50 kilo. lots, f.o.b. Springfield, Mo. .... kilo.	5.00	-
Choline dihydrogen citrate, 98% min., 50 kilo lots, f.o.b. Springfield, Mo. .... kilo.	6.00	-
Chrome green, CP extra light, bgs., divd. E. of Rockies .... lb.	1.68	-
light, bgs., same basis .... lb.	1.70	-
medium, bgs., same basis .... lb.	1.72	-
extra deep, CP., same basis .... lb.	1.74	-
Chrome orange, CP, bgs., divd. E. of Rockies .... lb.	.83	.89
Chrome yellow CP bbls., divd. E. of Rockies .... lb.	1.09	1.18
Chromic acid, 99¾%, flake dms., c.l., frt. equald. .... lb.	1.18	-
grd., same basis .... lb.	1.25	-
Chromium acetate, soln., 7½%, dms., 500-2,000-lb. lots, works, . lb.	.10	-
Chromium fluoride, dms., t.l., works .... lb.	.81	-
Chromium nitrate, dms., t.l., f.o.b. . lb.	1.45	-
10% metal soln., 500-lb. dms. same basis .... lb.	.74	.86
Chromium oxide, hydrated, 50-lb. bgs., c.l. .... lb.	5.50	-
pure, bgs., c.l. .... lb.	1.90	2.00
Cinnamic aldehyde, cns., dms. .... lb.	1.85	2.45
Cinnamic alcohol, 25-lb. cns. .... lb.	4.50	-
Cinnamon, H2 .... lb.	1.05	1.10
Cinnamon bark oil, bots. .... lb.	88.00	95.00
Cinnamon leaf oil, dms. .... lb.	2.80	-
Citral, nat., dms. .... lb.	5.50	6.65
syn., 55-gal. dms. f.o.b. .... lb.	3.18	-
Citric acid, USP, hydrous, gran., 250-lb. dms., t.l. .... lb.	1.19	-
Citric acid, USP, anhyd., gran. 250-lb. dms., t.l., del. .... lb.	.86	-
Citric acid anhyde, powder bc. higher		
Citronella oil, Ceylon, dms. .... lb.	2.12	2.24
Java, dms .... kilo	5.05	-
China, dms .... kilo	4.30	-
Citronellal, 25-lb cans .... lb.	3.85	7.40
Citronellol drums, f.o.b. .... lb.	3.68	-
Citronellyl acetate, dms .... lb.	5.50	6.50
Citronellyl formate, 25-lb. cns .... lb.	6.65	-
Civet, artl., bots .... lb.	20.00	-
nat. .... kilo	500.00	-
Clay ball, dom. air floated, bgs., c.l., Tenn. .... ton	49.00	-
dom., crushed, moisture-repellant, bulk, c.l., Tenn. .... ton	24.00	-
Clay China (see Kaolin).		
Cleaners, naphtha, 140° flash tanks., New Jersey or New York, divd. .... gal.	1.40	-
Clove leaf oil Indonesian, reg. dms. kilo	3.15	-
Madagascar, reg. .... kilo	3.90	-
Clove bud oil .... kilo	24.00	-
Cloves, Brazil .... lb.	2.18	2.20
Zanzibar .... lb.	4.20	-
Madagascar .... lb.	2.20	-

CMC, technical, 96% minimum, low or medium vis., bgs., 24,000 lbs., f.o.b. Hopewell, Va., 100% basis .... lb.	1.25	-
detergent makers, f.o.b. manufacturing point .... lb.	.64	-
CMC, purif., high vis., (see Cellulose gum).		
Coaltar pitch, indust., liq., works . ton.	250.00	255.00
roofing, 140-155, Federal specification RP-381 Type 1, bulk works .... ton	350.00	-
Cobalt acetate, dms., t.l., frt. alld. .. lb.	3.61	4.25
Cobalt carbonate, powd., dms., frt. alld. .... lb.	6.61	8.16
Cobalt chloride, dms., 5,000 lbs. or more, ft. equald .... lb.	4.15	-
Cobalt hydrate, dms., t.l., frt. alld. .. lb.	8.20	10.55
Cobalt metal, 99.5-99.9%, 250-kilo. dms., f.o.b. NY, Chicago. . lb.	11.70	-
Cobalt naphthenate, liq., 6% Co., dms., divd .... lb.	2.06	-
Cobalt nitrate, dms., t.l., frt. alld .... lb.	2.74	3.45
Cobalt oxide, imp., black, 72-73% Co. .... lb.	9.51	-
Cobalt oxide, imp., 70-71% Co. ... lb.	9.78	-
Cobalt phosphate powd. 32.1% Co., dms., divd .... lb.	1.35	-
Cobalt resinate fused, 3% Co., dms .... lb.	.38½	-
Cobalt sulfate, cryst., bgs., 10,000 lbs. or more, frt. alld. E. .... lb.	2.81	3.54
monohydrate, dms., frt. alld. .... lb.	4.56	6.02
Cobalt tallate, 6% Co., dms., divd. . lb.	2.16	-
Cocillana bark, bls. .... lb.	.40	.45
Cocoa butter, spot .... lb.	2.33	-
Coconut oil (See Oils, Fats & Waxes market report.).		
Coconut oil acids, distilled, t.c., f.o.b. .... lb.	.52	.58
double distilled, same basis ... lb.	.54	.63
Cod oil, f.o.b., Gloucester, Mass., bulk .... gal.	6.50	-
Codeine alkaloid, NF, 25-kilo lots, . kilo.	900.00	-
Codeine phosphate, USP, cns., 25-kilo lots .... kilo	640.00	-
Codeine sulfate, NF cns., 25-kilo lots .... kilo	775.00	-
Codliver oil, NF, dms. .... gal.	6.50	7.25
Copaiba balsam, dms .... lb.	1.50	-
Copaiba oil, cns., dms .... lb.	3.75	-
Copper acetate, monohydrate, cryst., tech., dms., t.l., works. ... lb.	.71	.74
Copper bromide, (cupric) 200-lb. dms., 100,000-lbs. -per-year contracts, works .... lb.	1.34	-
Copper carbonate, 55% Cu, dark, dense, 50-lb. bgs., c.l., t.l., works .... 100 lbs.	108.30	-
light, fluffy, 50 lb. bags, c.l., t.l., works .... 100 lbs.	109.30	-
Copper chloride (cupric), anhyd., c.l., works .... lb.	.90	-
Copper cyanide, tech. dms., 24,000-lb. lots or more .... lb.	2.30	2.62
Copper fluoborate, (cupric), liq. conc., dms., t.l., works, frt. equald .... lb.	.82	-
Copper gluconate, FCC grade, 25-lb. dm., frt. equald .... lb.	6.60	-
Copper metal electrolytic wire bars, divd., domestic, basis .... lb.	.62½	-
Copper naphthenate, liq., 8% Cu., dms., frt. alld .... lb.	1.19	-
Copper nitrate (cupric), purif., flake, dms., t.l., works .... lb.	.43¼	-
Copper oleate, solid, 8% Cu. dms., works frt alld .... lb.	.97	-
Copper oxide, black (cupric), dms., 80,000-lb. lots, works .... lb.	1.21	-
red (cuprous), dms., 97%, USN Type 1, (AA), 80,000-lb. lots, works .... lb.	1.19	1.20
red, 90%, Type 2, same basis ... lb.	1.15	-
Copper-8-quinolinolate, 10%, liq. emulsion, t.l., divd .... lb.	2.62	-
Copper sulfate, cryst., pentahydrate, 99% bgs., c.l., f.o.b. works .... 100 lbs.	46.45	-
CP, pentahydrate, cryst., dms., l.c.l., works .... 100 lbs.	60.00	-
monohydrated, 35% Cu, dms., c.l., works .... 100 lbs.	75.10	-
basic, bgs., c.l., works. ... 100 lbs.	88.30	-
Coriander oil, USP, dms .... lb.	22.00	28.00
Coriander seed Moroccan .... lb.	.36	-
Rumanian .... lb.	.36	.37
Corn oil (See Oils, Fats & Waxes market report).		
Corn oil, crude, foots (soapstock), 95% acid; New York .... lb.	.13½	.14
Corn oil acid, dms .... lb.	.50	-
tanks .... lb.	.32	.40
Corn syrup 43 Be., tanks, f.o.b. works .... 100 lbs.	11.22	11.43
Cortisone acetate, USP, dms., 5 kilos or more .... gram.	.80	-
Cottonseed meal (See Oils, Fats & Waxes market report.)		
Cottonseed oil (See Oils, Fats & Waxes market report.)		
Cottonseed oil, acidulated (soap stock), acid, 95%, tanks, N.Y. .... lb.	.13	-
Cottonseed oil acids, dist., dms. ... lb.	.63	-
tanks .... lb.	.55	-
Coumarin, NF X, cryst., over 600-lb. lots .... lb.	6.00	6.20
Cream of tartar (see Potassium bitartrate).		
Creosote, coaltar, grade 1, tanks, f.o.b. works .... gal.	1.15	1.18
soln., 80/20, tanks, same basis. gal.	1.134	1.17
p-Cresidine, fused, dms., works ... lb.	4.31	-
m-Cresol, 95-98%, dms., t.l., f.o.b. . lb.	1.71	-
tanks, same basis .... lb.	1.65	-
m,p-Cresol, 99%, dms., t.l., f.o.b. .. lb.	.94	-
bulk, same basis .... lb.	.82	-
o-Cresol, 99% pure, dms., t.l., f.o.b. lb.	.87	-
bulk, same basis .... lb.	.75	-
98% pure, dms., t.l., f.o.b. .... lb.	.87	-
bulk, same basis .... lb.	.75	-
p-Cresol, 98%, dms., t.l., f.o.b. .... lb.	1.22	-
bulk, same basis .... lb.	.95	1.15
Cresylic acid, coaltar, dom., metapara content above 25%, resin and tricresyl phosphate grades, tanks, frt. alld .... lb.	.58	-
Cresylic acid, dom., metapara content 25% or less, tanks, frt. alld. lb.	.58	-
Crotonic acid, 200-lb. dms., t.l., f.o.b. divd .... lb.	1.50	-
Cryolite syn., bulk, c.l., works .... ton	510.00	550.00

Cube root, powd., 5% rotenone, basis, 50-lb. bgs., t.l., works .... lb.	.60	-
Cumene, bulk, contract, f.o.b. .... lb.	.14	.14
Cumin seed, Indian, bgs .... lb.	.95	1.00
Cyanuric acid, dms., c.l., t.l. frt. equald .... lb.	1.16	1.37
Cyclamen aldehyde, 50% min. aldehyde content, dms. .... lb.	4.85	-
96.5%., dms .... lb.	7.35	9.20
90-92%, dms. .... lb.	7.85	-
Cyclohexane, bulk, barges, wks .. gal.	.9825	.9925
Cyclohexanol tech., tanks, f.o.b. ... lb.	.52	.66½
Cyclohexanone tech., tanks, f.o.b. works .... lb.	.55½	.58½
tanks, divd .... lb.	.565	-
Cyclohexylamine, tech., tanks, works .... lb.	.85	-

D

2,4-D acid, tech., 50-lb. bgs., c.l., t.l., works, frt. equald .... lb.	1.10	1.25
2,4-D butyl ester, tech., 55-gal. dms., c.l., t.l., works, frt. equald. . lb.	1.30	-
tanks, same basis .... lb.	1.25	-
2,4-D dimethylamine salt, t.c., t.t. works, frt. alld .... gal.	8.05	-
Decyl alcohol, mixed isomers, tanks, divd .... lb.	.32	-
perfume grade, dms .... lb.	.75	-
Defluorinated phosphate (tricalcium), feed grade, 18% P, c.l., bulk, f.o.b. works .... ton	195.00	228.00
Denatured alcohol, ethyl, CD18, CD19, tanks, divd E. .... gal.	1.87	-
NOTE: Tankcar sales require written authorization by Alcohol and Tobacco Tax Division.		
Denatured alcohol, ethyl,		
SD2B, tanks, divd. E. .... gal.	1.81	-
SD3A, tanks, divd. E. .... gal.	1.76½	-
SD23A, tanks, divd. E. .... gal.	1.86	-
SD23H, tanks, divd. E. .... gal.	1.89	-
SD29, tanks, divd. E. .... gal.	1.83	-
SD30, tanks, divd. E. .... gal.	1.72½	-
SD35A, tanks, divd. E. .... gal.	1.88½	-
Denatured alcohol, ethyl, brucine formula SD40, tanks. divd. E. .... gal.	1.83	-
ethyl, optional formula, SD40, tanks, divd. E. .... gal.	1.82½	-
For anhyd. alcohol on above formulae, prices are 12c. per gal. higher.		
West Coast divd. prices are the same as Eastern prices, except in Idaho, Oregon and Washington where a 5c. differential on tankcars is maintained.		
Desoxyephedrine hydrochloride (See Methamphetamine hydrochloride)		
Detergent alkylate, straight chain dodecylbenzene, tanks, barges, f.o.b. .... lb.	.45	-
Dextrin, corn, canary dark, paper bgs., c.l., works .... 100 lbs.	28.04	-
white, paper bgs., c.l., works .... 100 lbs.	27.43	-
Dextrose, anhyd., coml., bgs., c.l., divd. New York .... 100 lbs.	41.10	-
USP special, 100-lb. bgs., c.l., divd. New York .... 100 lbs.	46.50	-
Dextrose, hydrated coml, bgs., c.l., divd. New York .... 100 lbs.	24.25	-
Western zone .... 100 lbs.	25.60	-
Diacetone alcohol, acetone free, tanks, divd .... lb.	.52	-
Diacetyl, flavor grade, dms .... lb.	9.25	15.00
Diammonium phosphate, fert. grade. min. 18% N, 46% P. bulk, c.l., f.o.b. Fla. works .... ton	140.00	145.00
Diammonium phosphate, feed grade, 18% N, 20% P, bulk. c.l., f.o.b. Fla. works .... ton	240.00	-
bgs., same basis .... ton	260.00	-
Diammonium phosphate, tech., bgs., c.l., t.l., works, frt. equald .... 100 lbs.	52.50	-
food grade, bgs., c.l., t.l., same basis .... 100 lbs.	57.75	-
2,4-Di-tert-amylphenol, min. 95.5%, dms., c.l., t.l., works .... lb.	1.04	-
tanks, works .... lb.	.97	-
Diarylide yellow, OT, (yellow 14), dms., frt. alld .... lb.	6.20	-
o-Dianisidine dihydrochloride, 100%, MW 244, dms., t.l., divd. .. lb.	4.25	-
2,6-Di-tert-Butyl-p-Cresol (see Butylated hydroxytoluene)		
Dibutyl fumarate, tanks, f.o.b. works .... lb.	.77	.85
Dibutyl maleate tanks, f.o.b. works. lb.	.63	.64
Dibutyl phthalate, tanks, works .... lb.	.54	.60
Dibutyl sebacate tanks, works .... lb.	1.72	1.89
Dibutylamine, dms., c.l., divd .... lb.	1.12	-
tanks, same basis .... lb.	1.06	-
2-5-Dichloroaniline, flake, dms., works .... lb.	2.00	-
fused, dms., works .... lb.	1.80	-
3,4-Dichloroaniline, tech. 88%, solid, dms., c.l., t.l., f.o.b. works . lb.	1.46	1.57
o-Dichlorobenzene, tech., 80%, dms., c.l., t.l., divd .... lb.	.52	-
tanks, same basis .... lb.	.45	-
98% refd., dms., c.l., same basis. lb.	.54	-
tanks, same basis .... lb.	.47	-
p-Dichlorobenzene, graded, 300-lb. dms., t.l., f.o.b., frt. equald. lb.	.51	.52
tanks, liq., same basis .... lb.	.43	.47
2,6-Dichloro-4-nitroaniline, dms., 10,000 lbs. or more, works. lb.	3.30	-
Dichlorophenoxyacetic acid (see 2,4-D).		
Dicyclohexylamine, dms., c.l., t.l., f.o.b. .... lb.	1.35	-
tanks, same basis .... lb.	1.25	-
Dicyclohexyl phthalate, bgs., c.l., t.l., divd .... lb.	1.25	-
Dicyclopentadiene, high-purity, 97-98%, tanks, works .... lb.	.35	-
Diethanolamine, tanks, frt. alld .... lb.	.44	.47
Diethanolamine lauryl sulfate, tanks, frt. alld .... lb.	.41	-
DDVP (see Dimethyl dichlorovinyl phosphate).		

Diethyl barbituric acid (see Barbital)		
Diethyl carbonate, tankwagons, f.o.b. works .... lb.	1.40	-
Diethyl ethanolamine, CP dms., c.l., divd .... lb.	1.18	-
tanks, divd .... lb.	1.10	-
Diethyl ethanolamine tech., 8c. per lb. lower.		
Diethyl oxalate, dms., c.l., f.o.b. works .... lb.	1.80	-
Diethyl phthalate, tanks, f.o.b .... lb.	.69	[illegible]
odorless cosmetic grades, t.l., works .... lb.	.97½	-
Diethyl sulfate, tanks., frt. alld E. ... lb.	.59	-
Diethyl thiourea, dms., c.l., t.l., works .... lb.	2.48	-
Di-2-ethylhexyl adipate (see Dioctyl adipate).		
Diethyl toluamide. 95-97% min meta isomer dms., t.l., f.o.b. works .... lb.	2.75	-
N,N-Diethyl-m-toluidine, tech., liq., dms., c.l., f.o.b. .... lb.	3.18	-
tanks, same basis .... lb.	3.10	-
Diethylamine, dms., c.l., divd .... lb.	1.16	-
tanks, same basis .... lb.	1.02	-
N,N-Diethylaniline, dms., c.l., t.l., f.o.b. works .... lb.	1.83	-
tanks same basis .... lb.	1.75	-
Diethylbenzene, tanks, f.o.b. works lb.	.98	-
Di-2-ethylhexyl azelate (see Dioctyl azelate).		
Di-2-ethylhexyl phthalate (see Dioctyl phthalate).		
Diethylene glycol, tanks, divd. E. ... lb.	.29½	.31½
Diethylene glycol monobutyl ether, dms., c.l., frt. alld. E. .... lb.	.65	-
tanks, frt. alld. E. .... lb.	.57	-
Diethylene glycol monoethyl ether, dms., c.l., frt. alld. E. .... lb.	.64	-
tanks, frt. alld. E. .... lb.	.56	-
Diethylene glycol monomethyl ether, dms., c.l., frt. alld .... lb.	.62	-
tanks, frt. alld .... lb.	.54	-
Diethylene glycol monobutyl ether acetate, dms., c.l., divd. E. . lb.	.80	-
tanks, divd. E. .... lb.	.72	-
Diethylene glycol monoethyl ether acetate, dms., c.l., frt. alld. E. lb.	.80	-
tanks, frt. alld .... lb.	.72	-
Diethylenetriamine, tanks, f.o.b. works .... lb.	1.60	1.61
Diethylenetriamine pentaacetic acid, pentasodium salt solution, tank- cars/tanktrucks, frt-equalized .... lb.	.45	-
Digitoxin, USP, imp., bots. .... gram	2.60	3.00
Diglycol laurate, dms., ton lots .... lb.	32½	-
Diglycol stearate, dms., t.l. .... lb.	.62	.73
Dihydrazine sulfate, dms, works ... lb.	1.10	1.25
Dihydrostreptomycin sulfate, bulk kilo.	48.00	-
Dihydroxyacetone, 50-kilo lots, works .... kilo.	40.00	-
Di-isobutyl ketone, tanks, divd .... lb.	.60	-
Di-isobutyl phthalate tanks, divd E. lb.	.55	.57
Di-isobutylene, tanks, f.o.b. Houston .... lb.	.37	-
Di-isodecyl phthalate, tanks, divd .. lb.	.40	.40½
Di-isononyl phthalate, tanks, divd. . lb.	.40	-
Di-iso-octyl azelate, tanks, divd. E. . lb.	.99	1.07
Di-iso-octyl phthalate, tanks, divd. lb.	.40	-
Di-isopropanolamine, dms., c.l., frt. alld .... lb.	.66½	-
tanks, same basis .... lb.	.58½	-
Di-isopropylamine, dms., c l. divd ... lb.	1.17	-
tanks, same basis .... lb.	1.07	-
Dilauryl 3,3-thiodipropionate, dms., t.l., frt. alld .... lb.	1.89	-
Dill oil, USP, dms .... lb.	7.00	8.25
Dimethyl anthranilate, dms .... lb.	15.80	-
Dimethyl benzyl carbinyl acetate, 25-lb. dms .... lb.	6.95	-
Dimethyl carbonate, dms, t.l., f.o.b. works	.90	-
Dimethyl dichlorovinyl phosphate, 55-gal. dms., f.o.b. .... lb.	1.80	1.90
Dimethyl ethanolamine, anhyd., dms., c.l., divd. E. .... lb.	1.15	1.18
tanks, divd. E. .... lb.	1.07	1.10
Dimethyl ether, aerosol grade, tanks, divd .... lb.	.38	-
Dimethyl phthalate, tanks, f.o.b works .... lb.	.65	-
Dimethyl sebacate, tanks, f.o.b works .... lb.	2.48	2.88
Dimethyl sulfate, ret. dms., c.l., f.o.b. works .... lb.	.57	-
tanks .... lb.	.46	-
Dimethyl sulfide, tanks, works .... lb.	.59	-
Dimethyl sulfoxide, tanks, works .. lb.	.78	-
Dimethylacetamide, bulk f.o.b. .... lb.	.87½	-
Dimethylamine, 25% soln., tanks, frt. equald., 100% basis .... lb.	.63½	-
40% soln., tanks, frt. equald., 100% basis .... lb.	.63½	-
anhyd., tanks, frt. equald .... lb.	.54½	-
N,N-Dimethylaniline, t.l., f.o.b. .... lb.	1.03	-
t.l. dms .... lb.	1.11	-
N,N-Dimethylformamide, dms., c.l., t.l., f.o.b., works .... lb.	.57	-
tanks, same basis .... lb.	.49	-
2,4-Dinitroaniline. tons-lots, f.o.b. .. lb.	1.22	-
Dinitroaniline, orange toner, CP, bgs., divd. E. of Rockies .... lb.	5.20	-
2,4-Dinitrochlorobenzene, crystallizing at 47°, t.l., f.o.b. Charlotte, N.C. .... lb.	.96	-
2,4-Dinitrophenol, 250-lb. dms., f.o.b, Charlotte, N.C. .... lb.	1.95	-
Dinitrotoluene, mix., tech. f.o.b. works .... lb.	.30	.43
2,4-Dinitrotoluene, dms., c.l., t.l., works .... lb.	1.25	-
tanks, works .... lb.	1.20	-
Dioctyl adipate, tanks, frt. alld. E. .. lb.	.61	.70
Dioctyl azelate, tanks, divd. E. .... lb.	.99	1.04
Dioctyl phthalate, tanks, divd .... lb.	.40	.45
Dioctyl sebacate, 99%, tanks, f.o.b. works .... lb.	1.47	-
1,4-Dioxane, tanks, frt. alld. E. .... lb.	1.13	-
t.l., same basis .... lb.	1.21	-
Dipentaerythritol, bgs., c.l., t.l., divd. E. .... lb.	1.42	-
Dipentene steam-dist., tanks, f.o.b. Fla. works .... lb.	.25	-
sulfate turpentine derived, tanks . lb.	.25	-
Dip oil (see Tar acid oil).		
Diphenhydramine hydrochloride. USP, dom., 1,000-kilo lots, dms., divd .... kilo.	20.00	-
Diphenyl, 99.9%, bgs., c.l., t.l., works .... lb.	.74	-
tanks, works .... lb.	.65	-

Diphenyl oxide, tech. grade, tanks . lb.	1.11	1.20
Diphenylamine, refd., flake, bgs., t.l., works, frt. equald .... lb.	1.25	-
molten, tanks, works .... lb.	1.00	-
octylated, flake, bgs., t.l., f.o.b. works	7.68	-
Diphenylguanidine, bgs., t.l., frt. alld .... lb.	2.52	
Diphenylhydantoin-sodium USP, dms .... lb.	5.00	5.60
Diphenylmethane 4,4,-di-isocyanate, polymeric, bulk, c.l., min. frt. alld .... lb.	.91	-
Dipropylene glycol, tanks, frt. alld. . lb.	.45	-
Dipropylene glycol monomethyl ether, dms., c.l., divd .... lb.	.54	-
tanks, same basis .... lb.	.46	-
Di-o-tolylguanidine, powd., dms., t.l., frt. alld .... lb.	2.92	-
Di-o-tolylthiourea, tech., solid, dms., t.l., frt. alld .... lb.	3.11	-
Ditridecyl phthalate, tanks, divd .... lb.	.64	.65
Diundecyl phthalate, tanks, divd. .. lb	.61	.65
Divinylbenzene, 100% basis, tanks works .... lb.	2.75	2.60
dms, 100% basis .... lb.	3.00	2.70
1-Dodecanol, syn., tanks, f.o.b. .... lb.	.76½	-
Dodecenyl succinic anhydride, dms., c.l., t.l., divd .... lb.	.88	-
Dodecylbenzene (see Detergent Alkylate).		
Dodecylphenol, tanks, min. frt. alld. E .... lb.	.48	.53
Dyes, coaltar, certified colors for food, drugs and cosmetics, 100 lb. and over. frt. prepaid or alld.		
Blue, FD&C. No. 1 .... lb.	21.20	22.60
No. 2 .... lb.	29.15	29.22
Green, FD&C, No. 3 .... lb.	49.60	65.00
Red, FD&C, No. 3 .... lb.	24.00	24.50
Yellow, FD&C. No. 5 .... lb.	7.45	7.85
No. 6 .... lb.	6.45	6.75
Dyes, coaltar, certified colors for drugs and cosmetics. 100-lb. lots divd.		
Green, D&C, No. 5 .... lb.	38.60	-
No. 6 .... lb.	42.80	-
Red, D&C, No. 4 .... lb.	18.65	-
No. 17 .... lb.	38.90	-
No. 19 .... lb.	38.25	-
No. 22 .... lb.	12.45	-
No. 28 .... lb.	59.95	-
No. 33 .... lb.	48.95	-
Yellow, D&C. No. 7 .... lb.	21.00	-
No. 8 .... lb.	20.55	-
No. 10 .... lb.	48.80	48.85
No. 11 .... lb.	35.25	-
Dyes, coaltar, for general use in cloth and paper dyeing (by Color Index Name). f.o.b. works		
A Blk 1 Blue black ex. conc. .... lb.	5.75	-
Dyes, A Bl 9 Blue 2G .... lb.	5.46	-
A Bl 45 Alizarine Blu SAP 150% . lb.	19.85	-
A Bl 90 Alizarine Br. Cy G .... lb.	14.13	-
A Bl 113 Navy 5R .... lb.	6.55	-
A Gr 16 Gast 2G 333% .... lb.	22.12	-
A Or 7 11 .... lb.	3.72	-
A Or 8 RO Ex. Conc. .... lb.	4.00	-
A Or 10 Wool Or G .... lb.	4.30	-
A Or 74 Metallized Or GNA .... lb.	6.15	-
A R 2G .... lb.	5.13	-
A R 14 Azo Rubine 133% .... lb.	8.85	-
A R 18 Scarlet 4R Conc. .... lb.	5.45	-
A R 88 Fast Red A. Conc. .... lb.	6.85	-
A R 151 Silk Red 3B Conc. .... lb.	4.50	-
A V 17 5BNS Conc. .... lb.	9.75	-
AV 49 4BNS Conc. .... lb.	12.22	-
A Y 17 Fast Light Yell 2G. .... lb.	5.69	-
A Y 23 Tartrazine Ex Conc. .... lb.	6.18	-
B Bl 9 Zinc Free .... lb.	16.40	-
B Br 4 Bismark Brown R Ex. Conc. lb.	4.42	-
B G 1 Jade Crystals .... lb.	9.65	-
B Gr 4 Malachite Green Crystal. . lb.	6.90	-
B V 1 Methyl Violet Crystals .... lb.	6.80	-
B V 10 Rhodamine B Ex .... lb.	10.95	-
B Y 2 Bond Yell SFA 150% .... lb.	10.10	-
D Bl 1 Sky Blue 6B Conc. .... lb.	4.62	-
Ex. Conc. 300% .... lb.	9.25	-
D Bl 8 Azurine G Conc. .... lb.	9.45	-
D Blk 22 Fast Black GR .... lb.	2.85	-
Fast Black GR 150% .... lb.	4.28	-
D Br 230 Resin Fast Brown BRNB 200% .... lb.	7.23	-
D Gr 26 Resin Fast Green GL ... lb.	9.15	-
D R 2 4B Ex. Conc. .... lb.	7.98	-
D R 31 Brilliant-Red 12B Conc. . lb.	6.16	-
D R 80 Fast Red 8BLN .... lb.	6.15	-
D R 81 Paper Red 8BLP .... lb.	6.85	-
D R 251 Fast Scarlet AV .... lb.	6.25	-
D Or 102 Fast Orange WSP Liq. . lb.	2.47	-
WS. Conc. 150% .... lb.	11.25	-
D Y 4 Brilliant Paper Yell 3GX 125% .... lb.	4.69	-
Brilliant Paper Yell 3GX Liq .... lb.	1.75	-
D Y 11 Stilbene Yellow GA. Ex. Conc. .... lb.	3.03	-
D Y 41 Fast Yellow RGL Conc. 200% .... lb.	9.75	-
D Y 27 Resin Fast Yellow L5G ... lb.	14.40	-
Dis R 1 Scarlet BA .... lb.	4.26	-
Dis R 91 Pink REL 200% .... lb.	21.00	-
Dis Y 3 Yellow G .... lb.	3.86	-
Dis Y 54 Yellow 3G .... lb.	6.84	-
Dis Or 3 Orange GRA .... lb.	4.91	-
Dis Or 37 Orange OB .... lb.	3.77	-
Dis V 1 4RN Paste .... lb.	7.86	-
Dis V 26 Bordeaux BV 200% .... lb.	17.26	-
Dis B1 27 Blue BGLF .... lb.	10.05	-
Dis B1 102 Blue GFDA 300% .... lb.	22.80	-
50% Paste .... lb.	4.10	-
V G 1 Jade Green Double Paste . lb.	5.50	-
V Blk 25 Olive TA Paste .... lb.	5.85	-

E

Endrin, tech., 95-98%, dms., t.l. ... lb.	7.00	-
Ephedrine, syn. anhyd., USP, 80-oz. lots .... oz.	1.25	-
Ephedrine hydrochloride, NF, cryst., less than 1,000 kg. .... kilo	38.25	40.25
Ephedrine sulfate, USP, cryst., dms., less than 1,000 kilos .... kilo	43.00	45.25
Epichlorohydrin, tanks, divd .... lb.	.86	-

Epinephrine base, syn., USP, bots., 100-gram lots .... gram	.60	-
Epoxy resin, liquid, bulk tanks, divd .. lb.	1.31	1.41
Solid, bgs., t.l. .... lb.	1.28½	1.33½
Epsom salt (see Magnesium sulfate).		
Erythorbic acid, powd., gran., 100 lb. dms., t.l. or mixed t.l. f.o.b. works .... lb.	4.10	4.25
Ester gum, gum-rosin type, dms., c.l., divd., Ill., Md., Ky., E. States, Minneapolis, N.C., Ohio, St. Louis, St. Paul, Va., W. Va. lb.	.75	-
Ester gum, wood-rosin type, dms., c.l., same basis .... lb.	.43	.46
Ethyl acetate, syn., 85-88%, tanks, divd .... lb.	.41	.41½
99%, tanks, divd .... lb.	.41½	.42½
Ethyl acetoacetate dms., c.l., divd. . lb.	1.13	-
tanks, divd .... lb.	1.05	-
Ethyl acrylate, tanks, frt alld .... lb.	.66	-
Ethyl alcohol, syn., 190 pf., USP tax free, tanks, divd. E. .... gal.	1.55	-
Ethyl alcohol, absolute, 200 pf., tax free prices 12c. higher than 190 pf., tax free.		
Ethyl alcohol, fermentation, tanks, f.o.b. works .... gal.	1.06	1.28
Price range attributable to various state tax incentives.		
Ethyl alcohol, denat. (see Denatured alcohol, ethyl).		
Ethyl p-aminobenzoate, NF (see Benzocaine).		
Ethyl benzoate, dms .... lb.	1.35	1.50
Ethyl bromide, tech., 98%, dms., c.l., frt. alld. E. .... lb.	.76	-
Ethyl butyrate, dms. .... lb.	1.35	1.50
Ethyl cellulose, standard vis., 7 cps. bgs., t.l., frt. equald. E. .... lb.	4.55	-
standard vis., 10, 20, 45, 100 cps., t.l., frt. equald. E. .... lb.	4.17	4.22
medium vis., 50, 70, 100 cps., t.l., frt. equald. E. .... lb.	4.25	-
USP vis., 7 cps bgs., t.l., frt. equald. E .... lb.	4.88	-
USP 10,20,45,100 bgs., t.l., frt. equald. E .... lb.	4.59	4.69
VSP (medium) 50,70,100 bgs., t.l.. Frt. equald E. .... lb.	4.51	-
Ethyl chloride. tech., cyls., frt. alld. . lb.	.26	.28½
tanks, frt. alld .... lb.	.24	.26½
Ethyl cinnamate, dms .... kilo	41.00	-
Ethyl ethanolamines, mixed. dms., t.l., divd. E .... lb.	1.23	-
tanks, divd. E. .... lb.	1.15	-
Ethyl ether, refined, tanks, f.o.b. ... lb.	.48	-
Ethyl hexanoate, dms .... lb.	4.25	4.75
2-Ethylhexoic acid, dms., c.l., t.l., divd E. .... lb.	.63	-
tanks divd. E. .... lb	.57	-
2-Ethylhexyl acrylate, straight or mixed, tanks, frt. alld. E. .. lb.	.79.5	-
2-Ethylhexyl alcohol, tanks, divd. .. lb.	.35	-
Ethyl iodide, cbys, works .... lb.	6.25	-
Ethyl linalool, syn. 55-gal. dms. .... lb.	10.60	-
Ethyl linalyl acetate, syn., 55-gal. dms. .... lb.	10.85	-
Ethyl methacrylate, tanks, frt. equald .... lb.	1.06	-
n-Ethyl morpholine, dms., t.l., frt. alld .... lb.	2.00-	
tanks, same basis .... lb.	1.92	-
n-Ethyl-a-naphthylamine, dms., works .... lb.	1.04	-
Ethyl oxalate (see Diethyl oxalate).		
Ethyl parathion (see Parathion, ethyl).		
Ethyl silicate dist. (see Tetraethyl orthosilicate).		
Ethyl silicate, 40% available SiO_2, dms., t.l., f.o.b. works .... lb.	1.45	1.46
tanks, f.o.b. works .... lb.	1.39	-
N-Ethyl-m-toluidine, tech., liq., dms., c.l., f.o.b. .... lb.	3.18	-
tanks, same basis .... lb	3.10	-
N-Ethyl-o-toluidine, dms .... lb.	2.85	2.90
Ethyl vanillin 100 lb. dms., 500 lbs. or more .... lb.	13.50	-
25 lb. dms., 500 lbs. or more .... lb.	13.75	-
100 lb. dms., less than 500 lbs. .. lb.	14.00	14.50
Ethylamine (see Mono-Di- and Tri-)		
N-Ethylaniline, dms., c.l., t.l., f.o.b. works .... lb.	1.66	-
tanks, same basis .... lb.	1.58	-
Ethylbenzene, bulk, f.o.b. Houston, Tex .... lb.	.22	.23
Ethylene, contract, divd .... lb.	.18	.18½
Ethylene brassylate, dms .... lb.	16.00	16.25
Ethylenediamine, 99%, tanks, f.o.b. works .... lb.	1.30	1.305
Ethylenediamine dihydriodide .... lb.	7.56	9.25
Ethylenediamine tetraacetic acid, tetrasodium salt, soln., t.c., t.t., frt. equald .... lb.	.36½	-
Ethylene dibromide dms., c.l., frt., equald .... lb.	.38	.46
tanks, frt. equald .... lb.	.32	.42
Ethylene dichloride, tanks, f.o.b. works .... lb.	.17	.17¼
Ethylene glycol, indust., tanks, frt. alld .... lb.	.31	-
Ethylene glycol, monobutyl ether, tanks, divd. E. .... lb.	.41½	-
Ethylene glycol monoethyl ether, tanks, divd. E .... lb.	.51	-
Ethylene glycol monomethyl ether, tanks, divd. E .... lb.	.34	-
Ethylene glycol monobutyl ether acetate, tanks, frt. alld. E. ... lb.	.64½	-
Ethylene glycol monoethyl ether acetate, tanks, ft. alld., E. ... lb.	.55½	-
Ethylene glycol monomethyl ether acetate, tanks, frt. alld. E. ... lb.	.43	-
Ethylene oxide, tanks f.o.b. .... lb.	.35	.45
Ethylene trichloride (see Trichloroethylene).		
Eucalyptol, NF, dms. Portuguese . kilo.	7.60	-
Eucalyptol, NF, dms. Portuguese . kilo.	7.50	-
Eucalyptus Citriodora Oil, Chinese kilo	3.08	-
Eugenol, USP, dms .... kilo	7.55	-

F

Fennel oil, sweet, USP, cns .... kilo	9.00	-
Fennel seed, Egypt .... lb.	.37	-
Indian .... lb.	.60	.82
Fenugreek seed, Indian, bgs .... lb.	.25	.82
Ferric chloride anhyd., tech., 350-lb. dms., c.l., works .... 100 lbs.	36.00	-
Ferric chloride, 42 Be, photo grade dms., c.l., works .... 100 lbs.	9.10	-

Ferric chloride, sewage grade, 100 percent basis, f.o.b. works, tank works .... ton	176.00	255.00
Ferric nitrate, cryst., dms., t.l., f.o.b. lb.	.64	-
Ferric oxalate, tech., gran., 50-lb. dm., f.o.b. works .... lb.	1.65	-
Ferric oxides (see Iron Oxides).		
Ferric phosphate, FCC insoluble powder, dms, 10,000 lbs. .... lb.	1.10	1.15
Ferric pyrophosphate, soluble, purif., pearls, 50-lb. dm. .... lb.	1.11	-
Ferric resinate, precip., 6.75% Fe, dms., ton lots frt. alld .... lb.	.45	-
Ferric sulfate, partly hydrated, 100-lb. bgs., c.l., works .... ton	141.00	-
bulk, works .... ton	117.00	-
Ferric ammonium citrate, NF, brown, green gran. 100 lb. dms., 2,000 lb. min., f.o.b. shipping pt. .... lb.	2.00	2.95
2c. per pound surcharge for shipments W. of Denver		
Ferric-ammonium oxalate, fine gran., 250-lb. dms., t.l., f.o.b. works. E. .... lb.	.42	-
Ferric hydroxyethylene diaminetriacetic acid, industrial grade, sodium salt, soln., 4.5% Fe, t.c., t.t., f.o.b. works .... lb.	.55	-
agricultural grade, sodium salt solution, 5% Fe, t.c., t.t., f.o.b. works .... lb.	.64	-
Ferrous fluoborate liq. conc., dms., t.l., works, frt. equald .... lb.	.64	-
Ferrous gluconate, NF, t.l., works E. lb.	2.25	-
Ferrous naphthenate, liq., 6%, Fe, dms., divd .... lb.	1.17	-
Ferrous sulfate, moist, bulk, t.l. f.o.b. works .... ton	30.00	-
heptahydrate, gran., bulk, t.l., f.o.b. works .... ton	145.00	150.00
monohydrate, gran., bulk., t.l., f.o.b. works .... ton	170.00	180.00
USP, powd., 400-lb. dms .... lb.	.49	-
cryst., 250-lb. dms .... lb.	.61	-
Fir oil, Canada dms .... lb.	10.00	-
Siberia, dms. .... lb.	12.75	-
Fish oil, refd., alkali, tanks, c.l. .... lb.	.29	-
kettle-bodied, tanks .... lb.	.32	.36
light, cold-pressed, dms., c.l. ... lb.	.34	-
tanks .... lb.	.26	-
Fishmeal, dom., menhaden, 60% protein grd., bulk, f.o.b. Atlantic port .... ton	295.00	-
f.o.b. Gulf port .... ton	290.00	-
Imp., Chilean, 65% protein min., bulk, c.l., t.l., ex whse., f.o.b. Atlantic and Gulf ports. .. ton.	285.00	-
Fluoboric acid, dms., t.l., works, frt equald .... lb.	.70	-
Fluorocarbon, No. 11 bulk, tanks, delvd .... lb.	.57	.64
No. 12, bulk, same basis .... lb.	.68	.74
No 22, bulk, same basis .... lb.	1.05	1.14
No. 113, bulk, same basis .... lb.	.89	.93½
No. 114, bulk, same basis .... lb.	1.02	1.08
Fluosilicic acid (see Hydrofluosilicic acid).		
Formaldehyde, 37% methanol free (uninhibited) divd., gulf .... lb.	.088	.0905
44-45% (1% methanol) tanks, divd .... lb.	.1015	.1085
37% (inhibited 7% methanol, divd .... lb.	.0945	.1025
37% (inhibited 11-15% methanol) tanks, divd .... lb.	.1055	.1060
Formamide, tanks, f.o.b. .... lb.	.39	-
dms., same basis .... lb.	.44	-
Formic acid 90% tanks, f.o.b. works .... lb.	.36½	-
95% dms., c.l., works .... lb.	.51½	-
Fructose, cryst., 18,000 kilos or more, dms. .... lb.	.90	1.03
Fumaric acid, food grade, bgs. t.l., frt. equald. E. .... lb.	.75½	.77½
tech. grade, bgs., t.l., f.o.b. frt. equald .... lb.		.82½
Furfural, tanks, f.o.b. Cedar Rapids, Iowa, and Belle Glade, Fla. lb.	.75	-
Furfuryl alcohol, tanks, f.o.b. Memphis, Tenn. and Omaha, Neb. ... lb.	.72	-

G

G salt, dms., frt. alld. 100% basis .. lb.	2.30	-
Gallic acid, 400-kilo lots .... kilo	23.05	-
Garlic oil, dms., Egyptian .... kilo	85.00	105.00
Gelatin, edible, 100 AOAC test, dms., l.t.l., divd .... lb.	1.60	1.75
125 AOAC test, dms., l.t.l. .... lb.	1.75	1.85
150 AOAC test, dms., l.t.l. .... lb.	1.85	1.95
175 AOAC test, dms., l.t.l. .... lb.	1.95	2.05
200 AOAC test, dms., l.t.l. .... lb.	2.05	2.15
225 AOAC test, dms., l.t.l. .... lb.	2.10	2.25
250 AOAC test, dms., l.t.l. .... lb.	2.20	2.35
275 AOAC test, dms., l.t.l. .... lb.	2.30	2.45
300 AOAC test, dms., l.t.l. .... lb.	2.50	2.65
Gentian violet (see Methyl rosaniline chloride).		
Geraniol, syn., 90-92%, dms. .... lb.	5.25	-
nat., 90-92%, dms. .... lb.	3.60	-
syn. 96-98%, dms .... lb.	5.75	-
Geranium oil, Moroccan .... lb.	24.00	27.50
Bourbon .... lb.	33.00	38.00
Chinese .... kilo	67.00	85.00
Egypt .... lb.	65.00	-
Turkish (see Palmarosa oil).		
Geranyl acetate, dms .... lb.	5.44	6.00
nat., dms .... lb.	10.95	-
Geranyl formate, syn., dms. .... lb.	6.60	-
nat., dms .... lb.	15.95	-
Gilsonite, g.p., bulk, c.l., f.o.b. Bonanza, Utah .... ton	180.00	-
selects, same basis .... ton	160.00	-
Ginger, Cochin, bgs .... lb.	.63	.65
Chinese sliced .... lb.	.65	.70
Ginger oil, Chinese .... kilo	39.00	46.00
Indian .... kilo	44.00	46.00
Ginger oleoresin, NF, bots .... lb.	30.00	-
Glauber's salt (see Sodium sulfate).		
Gluconic acid tech. 50% dms., c.l., t.l., f.o.b. works .... lb.	.50	-
tanks, same basis .... lb.	.44	-

CHEMICAL PRICES

WEEK ENDING OCT 3, 1986

Glue, bone, extracted, green, jellygrams, bgs., c.l. .... lb.	-	-
85 jellygrams, bgs., c.l., f.o.b. .. lb.	.66	-
115 jellygrams, bgs., c.l., f.o.b. .. lb.	.76	-
135 jellygrams, bgs., c.l., f.o.b. .. lb.	.77	-
164 jellygrams, bgs., c.l., f.o.b. .. lb.	.79	-
192 jellygrams, bgs., c.l., f.o.b. .. lb.	.87	-
220 jellygrams, bgs. c.l. f.o.b. ... lb.	.93	-
Glue, hide,		
108 jellygrams, bgs., t.l., f.o.b. ... lb.	.80	-
135 jellygrams, bgs., t.l., f.o.b. .. lb.	.85	-
164 jellygrams, bgs., t.l., f.o.b. .. lb.	.90	-
192 jellygrams, bgs., t.l., f.o.b. .. lb.	.95	-
222 jellygrams, bgs., t.l., f.o.b. .. lb.	1.00	-
251 jellygrams, bgs., t.l., f.o.b. .. lb.	1.05	-
283 jellygrams, bgs., t.l., f.o.b. .. lb.	1.10	-
315 jellygrams, bgs., t.l., f.o.b. .. lb.	1.15	-
347 jellygrams, bgs., t.l., f.o.b. ... lb.	1.20	-
379 jellygrams, bgs., t.l., f.o.b. .. lb.	1.25	-
411 jellygrams, bgs., t.l., f.o.b. .. lb.	1.30	-
444 jellygrams, bgs., t.l., f.o.b. .. lb.	1.35	-
477 jellygrams, bgs., t.l., f.o.b. .. lb.	1.40	-
Glutamic acid, 99½% dms., 100-lb. lots, frt. alld .... kilo	6.65	-
Glycerine, nat., refd., USP, CP 99½% tanks, divd .... lb.	.89½	-
USP, CP, nat. 96%, tanks, divd. . lb.	.87¾	-
Syn. 96%, tanks divd .... lb.	.89¼	-
Syn. 99.5%, tanks divd .... lb.	.91	-
Glycine (see Aminoacetic acid).		
Glyceryl guaiacolate. 100-lb. fib. dms. f.o.b. .... kilo	14.50	-
Glycolic acid (see Hydroxyacetic acid)		
Glyoxal 40% soln., bulk, tanks, divd .... lb.	.44½	-
Grapefruit oil, Fla., dms .... lb.	2.75	-
Calif., dms .... lb	2.25	-
Israeli .... lb.	2.25	-
Graphite, amorph, powd., bgs, dms., ex whse .... lb.	.16	.40
cryst., 88-90%, powd., bgs., dms., ex whse .... lb.	.30	.60
Graphite, cryst., 90-92%, powd., bgs., dms., ex whse .... lb.	40	75
95-96% powd., bgs., dms, ex whse .... lb.	.60	.90
Graphite, amorph, cryst., 97% and up, powd., bgs., dms., ex whse .... lb	.80	1.20
Graphite, flake, No. 1, 90-95%, bgs., dms., ex whse .... lb	.65	.75
No. 2, 90-95%, bgs., dms., ex whse .... lb.	.65	.75
Grease (See Oils, Fats & Waxes market report)		
Grease oil (See Lard oil)		
Guaiacol, tech, 500-lb dms., 24,000 lb. min., f.o.b. Wallingford, Conn. .... lb.	2.70	-
NOTE: Purified grades are 10c. higher		
Guaiacwood oil, dms. .... lb.	2.50	-
Guar gum, edible, bgs., c.l., f.o.b. ship't. pt. .... lb.	.50	.75
Indust., bgs., high viscosity, c.l., same basis .... lb.	.50	.65

H

Heliotropin, dms .... lb.	8.00	8.25
Hemlock oil (see Spruce oil).		
Henbane leaves, bls .... lb.	.55	-
Heptane, indust., tanks, f.o.b. Beaumont, Tex .... gal.	1.07	-
95%, tanks, f.o.b. Houston, Tex .... gal.	1.18	-
Heptanoic acid, syn., tanks, f.o.b.	.65	-
1-Hexadecanol, syn., tanks, f.o.b. ... lb.	.43½	-
Hexahydrophthalic anhydride, tech. dms., l.t.l., f.o.b. works ... lb.	1.42	-
Hexamethylenetetramine, gran. bgs., c.l., t.l., works .... lb.	.65	-
gran. dms., c.l., t.l., works .. lb.	.59	-
pdr. bgs., c.l., t.l., works .... lb.	.60	-
powd. dms, c.l., t.l., works .. lb.	.63	-
Hexane, indust., tanks, works .... gal.	1.01	1.15
95%, tanks, f.o.b. Houston, Tex .... gal.	1.12	-
1-Hexanol, syn., tanks, f.o.b. .... lb.	.60	-
Hexyl alcohol, mixed isomers, tanks .... lb.	.32	-
p-Hexyl methacrylate, dms., c.l., works .... lb.	.75½	-
Hexylene glycol, tanks, divd .... lb.	.50	-
Hexylresorcinol, USP, dms., 25-lb. lots or more, frt. alld .... lb.	30.00	-
Homatropine hydrobromide, USP, 10-100-oz. lots, bots .... oz.	10.25	11.30
Homatropine methylbromide, USP, 10-250 oz. lots, bots .... oz.	9.70	10.70
Horehound herb, bls .... lb.	.25	.28
Hydrazine hydrate, 85%, t.l., frt. alld .... lb.	1.64	-
55-gal. dms., t.l., frt. alld. ... lb.	1.61	-
Hydriodic acid, purif., 47%-57%, 2-cbys., f.o.b. works .... lb.	7.50	-
Hydroabietyl alcohol, tech., solid, dms., c.l., f.o.b. zone 1 .... lb.	.85	-
tanks, f.o.b. zone 1 .... lb.	.80	-
Hydrobromic acid, 48% dms., c.l., t.l., f.o.b. .... lb.	.38½	-
Hydrochloric acid, anhyd. (see Hydrogen chloride).		

CHEMICAL PRICES

WEEK ENDING OCT 3, 1986

Hydrochloric acid, 20° Be, tanks, works, East ... ton	55.00	65.00
Midwest ... ton	60.00	70.00
Gulf Coast ... ton	57.00	-
West Coast ... ton	90.00	105.00
22° acid, same basis, East ... ton	66.00	76.00
Midwest ... ton	66.00	70.00
Gulf Coast ... ton	63.50	-
West Coast ... ton	100.00	115.00
NOTE: Prices vary and are either freight collect freight equalized depending on producer and location.		
Hydrocortisone acetate, micronized, dms., 25 kilos or more . gram.	.70	-
Hydrocortisone, alcohol, micronized, dms., 25 kilos or more . gram.	.70	-
Hydrofluoric acid, anhyd. (see Hydrogen fluoride)		
Hydrofluoric acid, aqueous. 70% tanks., f.o.b. frt. equald ... 100lbs.	43.00	-
Hydrofluosilicic acid, 15-gal. dms., t.l., works, 30% basis ... ton	-	-
tanks, 100% basis, works ... ton	190.00	210.00
Hydrogen bromide, anhyd. cyls., extra, 30,000-lbs., f.o.b. works . lb.	7.00	-
Hydrogen chloride, anhyd., 50-lb. cyls., c.l., works ... lb.	.65	-
600-lb. cyls., c.l., same basis . lb.	.62	-
Hydrogen chloride, anhyd., tube trailers, seller's trailer, min. 100,000 lbs. a year ... lb.	.37	-
tube trailers, buyer's trailer ... lb.	.27	-
Hydrogen chloride anhyd., tanks, works ... ton	270.00	-
Hydrogen cyanide, liq., 99.5%, tanks, works ... lb.	.50	-
Hydrogen fluoride, anhyd., tank cars c.l., f.o.b., frt. equald ... lb.	.6875	-
Hydrogen peroxide, 35% tech., tanks, works, ft. equald ... lb.	.2325	-
50% tankcars, frt. equald ... lb.	.3225	-
70%, tankcars frt. equald ... lb	.45	-
Hydrogen sulfide, liq., 99.25% min. seller's tanks, works ... lb.	.12	.13
170 lb. cylinders ... lb.	2.27	-
Hydroquinone, photo grade, consumers c.l., t.l., divd ... lb.	2.54	-
tech. dms. c.l., divd ... lb.	1.95	-
Hydroxyacetic acid, tech., 70%, tanks, Belle, W. Va. ... lb.	.49½	-
Hydroxylammonium sulfate, dms, t.l., f.o.b. ... lb.	.63	-
p-Hydroxybenzene sulfonic acid (see p-Phenolsulfonic acid).		
Hydroxybutyl methylcellulose (visc. 12,000 cps) 50 lb. bags, tl., cl. 30,000 lb. min., divd., zone 1 ... lb.	2.10	-
Hydroxycitronellal dimethyl acetal, dms ... lb.	16.55	-
p-Hydroxydiphenylamine, dms., t.l., f.o.b. works ... lb.	4.10	-
Hydroxycitronellal, natural, dms ... lb.	9.40	-
pure, dms ... lb.	13.60	-
extra grade, dms ... lb.	14.80	-
syn., dms ... lb.	9.50	-
Hydroxyethyl cellulose, t.l., divd ... lb.	2.07	2.12
Hydroxyethyl methylcellulose (visc. 5,000 through 45,000 cps.) 50 lb. bags, t.l., c.l., 30,000 lb. min., divd., zone 1 ... lb.	2.73	-
Hydroxypropyl methylcellulose, premium, U.S.P. (visc. 4,000 through 15,000) 50 lb. bags, t.l., c.l., 30,000 lb. min., divd., zone 1 ... lb.	2.87	-
Hydroxypropyl methylcellulose, U.S.P (visc. 50 through 100 cps) 50 lb bags, t.l., c.l., 30,000 lb. min., divd, zone 1 ... lb.	2.99	-
Hydroxypropyl methylcellulose (visc. 4,000 through 15,000 cps) 50 lb. bags, t.l., c.l., 30,000 lb. min., divd., zone 1 ... lb.	2.17	-
Hydroxypropyl methylcellulose (visc. 50 through 100 cps) 50 lb. bags, t.l., c.l., 30,000 lb. min., divd., zone 1 ... lb.	2.64	-
8-Hydroxyquinoline (see Oxyquinoline)		
Hypophosphorous acid, purif., 50% dms., c.l., works ... lb.	3.15	-

I

Ichthammol NF 200-kilo dms. ... lb.	4.25	4.50
Iminodiacetic acid, 98% min., dms., c.l., t.l., works ... lb	3.00	-
Indole, dms ... lb.	25.50	-
Inositol, 50-kilo dms, 1000 kilos or more, f.o.b. works ... kilo	17.50	22.00
Iodine, crude, dms ... kilo	13.50	18.00
Iodine USP ... lb.	14.21	14.59
Iodochlorhydroxyquin, USP, XVI 50-kilo dms., 100-499 kilos, frt. alld. ... kilo	35.00	45.00
Iodoform, NF, dms, 300-lbs, f.o.b. works ... lb.	24.00	-
a-Ionone, dms ... lb.	18.20	-
b-Ionone, dms ... lb.	13.10	-
Ipecac root, whole, bgs ... lb.	25.00	-
Irish moss, bleached, prime, whole ... lbs.	.55	.60
Iron blue, alkali-resistant, bgs., l.c.l., ton lots, div. E. ... lb.	2.70	-
Iron blue, reg., bgs., l.c.l., ton lots, same basis ... lb.	2.00	2.15
Iron, purif., powd., pails, 10-100-lb. lots ... lb.	1.00	-
Iron oxide, black, syn., bgs., c.l., frt. equald ... lb.	.68½	.75½
Iron oxide, brown, syn., bgs., c.l., frt. equald ... lb.	.68	.78½
Iron oxide, metallic brown, l.c.l., bgs., frt. equald ... lb.	.13	.15
Iron oxide, nat., red., dom., pure, bgs., c.l., works ... lb.	.275	.40
Iron oxide, yellow, ... lb.	.18	-
syn., bgs., c.l., frt. equald. . lb.	.63	.71
Iron oxide, buff, nat., dom, bgs., c.l., t.l., works, light ... lb.	.75	.80
dark ... lb.	.60	-
other shades, bgs., c.l., frt. equald ... lb.	.50	.55
Isatoic anhydride, bgs., f.o.b. works lb.	1.40	-
Isoamyl alcohol, 95% tanks, frt. alld ... lb.	1.44	1.48
Isoborneol, 100 lb. dms. ... lb.	7.25	-
Isobornyl acetate, dms ... lb.	.80	1.15
Isobutyl acetate, solvent grade, tanks, frt. alld ... lb.	.45	.48
Isobutyl acrylate, tanks, frt. alld. E. . lb.	.71	-
Isobutyl alcohol, tanks, divd ... lb.	.29	-
Isobutylene, 99%, tanks, f.o.b. works ... lb.	.32	-
Isobutyl isobutyrate, tanks, f.o.b. works ... lb.	.42½	-
Isobutyl methacrylate, tanks, divd. . lb.	.87	-
Isobutyl phenylacetate, dms. ... lb.	3.10	3.50
Isobutyl salicylate, dms. ... lb.	3.45	-
Isobutyraldehyde, tech., dms., c.l., divd ... lb.	.43	-
tanks, divd. ... lb.	.35	-
Isobutyric acid, dms., c.l., t.l., divd. . lb.	No Prices	
tanks, same basis ... lb.	.75	
Isobutyronitrile, dms., c.l., f.o.b. works frt. collect ... lb.	.84	-
tanks, same basis ... lb.	.75	-
Isoeugenol, dms ... lb.	5.20	5.60
Isoniazid, powd. ... kilo	12.00	-
Isonicotinic acid, hydrazine (see Isoniazid).		
Isononyl alcohol, dms., t.l. ... lb.	.48	-
Iso-octyl alcohol, tanks, divd ... lb.	.44	-
Isophorone, tanks divd ... lb.	.81	-
Isophthalic acid, 99%, bulk, f.o.b., Joliet, Ill., min. frt. alld ... lb.	.46	-
Isophthalonitrile, bgs., t.l., works ... lb.	2.65	-
Isopropyl acetate, tanks, divd ... lb.	.47	-
Isopropyl alcohol, anhyd., 99%, tanks, divd ... gal.	1.38	-
refd., 95%, tanks, divd ... gal.	1.31	-
refd., 91%, tanks, divd ... gal.	1.25	-
Isopropyl ether, tanks, divd ... lb.	.44	-
crude, tanks, divd ... lb.	.37	-
Isopropylamine. (see Mono-, Di- or Tri-).		
Isopropyl myristate, dms., t.l., E. ... lb.	1.19	1.50
Itaconic acid, refd. bgs t.l. ... lb.	1.45	1.48

J

J acid, paste, dms., works, 100% basis ... kilo	4.75	-
Japan wax, cs. ... lb.	5.50	5.60
Jojoba oil, 55-gal. dms., f.o.b. Arizona producing point ... gal.	55.00	60.00
Juniper berry oil, Italian ... kilo	47.00	-

K

Kaolin, water washed, fully calcined, bags c.l., f.o.b. Georgia .. ton	255.00	-
NF pwd., colloidal, bacteria controlled, 50 lb. bags., 5,000 lb. lots ... lb.	.24	-
Kaolin, uncalcined. No. 1 coating. bulk, c.l., f.o.b., Georgia ... ton	94.00	-
No. 2 coating ... ton	75.00	-
No. 3 coating ... ton	73.00	-
No. 4 coating ... ton	70.00	-
filler, gen.l purpose, same basis ... ton	58.00	-
delaminated water washed, uncalcined paint grade 1 micron avg., same basis ... ton	182.00	-
dry-grd. airfloated soft, same basis ... ton	60.00	-
Karaya gum, No. 1, powd., bbls ... lb.	2.25	-
No. 2, powd., bbls ... lb.	1.95	-
Kola nuts, bgs ... lb.	.50	.53

L

Lacquer diluent petroleum, 140F.-200F. b.r., t.c., New Jersey and New York ... gal.	1.25	-
Houston, Texas ... gal.	1.29	-
Lacquer diluent, petroleum 200F.-240F. b.r., tankcars, New York and New Jersey ... gal.	1.20	1.25
Houston, Tex. ... gal.	1.12	-
Lactic acid, food grade 88%, t.c., f.o.b. works ... lb.	1.06	-
50%, t.c., frt. equald ... lb.	.62	-
tech., 88%, t.c., frt. equald ... lb.	1.03	-
Lactose, edible, reg. bgs., c.l., works ... lb.	.22	.28
Lactose, USP, reg. dms., c.l., t.l., frt. equald ... lb.	.55	.69
Lactose, USP, spray dried, bgs., t.l., frt. equald ... lb.	.60	-
Lake C, red toner. (red 53) bbls., frt. alld ... lb.	5.70	-
Lanolin, anhyd., cosmetic. 400-lb. dms., works ... lb.	1.18	1.25
pharmaceutical, 400-lb. dms. works ... lb.	1.15	-
tech., (under 2% f.f.a.). 400-lb. dms., works ... lb.	1.08	113
Lard (See Oils, Fats & Waxes market report.)		
Lard oil, No. 1, dms., c.l., f.o.b. ... lb.	.34	
tanks, same basis ... lb.	.28	
Lard oil, extra, winter-strained, dms., c.l. ... lb.	.41	-
tanks, same basis ... lb.	.33	-
prime, burning, dms., c.l., same basis, Chicago ... lb.	.43	-
prime, burning, tanks, same basis ... lb.	.35	-
NOTE: 300 Mi. rad. 1¼c. higher, except Texas, 2c., and West Coast, 3c. higher.		
Laurel leaves, Turkish ... lb.	2.90	-
Laurent's acid, drums, f.o.b. ... lb.	3.85	-
Lauric acid, coml., pure bgs., c.l. ... lb.	.65	.71
Lauric aldehyde (aldehyde C-12). dms ... lb.	7.75	-
n-Lauryl methacrylate, dms., c.l., t.l., works ... lb.	1.72	-
Lavandin oil, Abrialis, 30-32%, dms. lb.	4.00	-
Lavender flowers, ord. ... lb.	.65	.75
medium, bls ... lb.	.80	.90
select. bls. ... lb.	1.10	1.19
Lavender flower oil, NF, French, 40-42%, ester, cns. ... lb.	9.25	13.50
spike, Spanish, dms ... kilo	15.00	22.00
Lead acetate, purif., flake. 400-lb. dms., works ... lb.	.46	-
tech., flake, t.l., 400lb. dms., works ... lb.	.37	-
Lead blue, basic, sulfate, bbls., c.l., ship, t.pt., f.o.b. ... lb.	.87	-
Lead carbonate. (see Lead white basic carbonate).		
Lead chloride, 400-lb. dms., works. lb.	3.25	-
Lead dioxide, tech., powd., 200-lb. dms., t.l., works ... lb.	.66	.70
Lead fluoborate, liq. conc., dms., t.l., works, frt. equald ... lb.	.65	-
Lead metal, divd ... lb.	.18	.18½
Lead monosilicate, milled, bgs., c.l., f.o.b. works ... lb.	.58½	-
coarse, bgs., c.l., same basis ... lb.	.57½	-
Lead naphthenate liq., 24% Pb. dms., frt. alld ... lb.	.93	-
Lead nitrate tech., cryst., 400-lb. dms., t.l., works ... lb.	.32½	-
Lead peroxide (see Lead dioxide).		
Lead red, 95% Pb_3O_4, or less, bgs. c.l., works ... lb.	.37	-
Lead red, 97% Pb_3O_4, bgs. c.l., works ... lb.	.37½	-
Lead, red, 98% Pb_3O_4, bgs., c.l., same basis ... lb.	.37½	.40½
Lead silicate (see Lead, white, basic silicate).		
Lead silicochromate, bgs., c.l., works ... lb.	.35	-
Lead sulfate (see Lead, blue, basic sulfate and Lead, white, basic sulfate)		
Lead, white, basic carbonate, bgs., c.l., frt. alld ... lb.	.62	-
Lead, white, basic, silicate, bgs., c.l., same basis ... lb.	.87	-
Lead, white, basic sulfate, bgs., c.l., same basis ... lb.	.85	-
Lecithin, edible, tech., bleached, non-ret. dms., l.c.l., works ... lb.	.36	-
unbleached non-ret. dms., l.c.l., same basis ... lb.	.34	-
edible, tech. bleached, non-ret., dms., t.l., works ... lb.	.28	-
unbleached, non-ret., dms., t.l., same basis ... lb.	.26	-
Lemon oil, Argentina ... kilo	14.00	-
Brazil ... lb.	6.50	7.00
Calif., USP, dms ... lb.	9.00	9.35
Italian ... lb.	12.50	-
Lemongrass oil, Indian, dms ... kilo	11.25	-
Guatemalan, dms ... lb.	2.25	-
dl-Leucine, dms., 1 kilo works ... kilo	60.00	90.00
Licorice root, whole, bls ... lb.	.40	.50
gran., bls ... lb.	.70	.90
powd., bls ... lb.	.95	-
Lignosulfonate (see under Ammonium or Sodium lignin sulfonate).		
Lime, chemical, pebble (quicklime), bulk, 50,000 lbs., works, f.o.b. plants ... ton	39.00	45.00
Lime, chemical, hydrated, bulk, same basis ... ton	46.00	50.00
bgs., same basis ... ton	54.00	57.00
Lime, NF, purif., 100-lb. dms ... lb.	.69	-
Lime oil, dist., Mexican, dms ... lb.	6.00	-
Haitian, dist., dms ... lb.	8.00	-
expressed, dms. ... lb.	17.50	-
Lime salts (see Calcium).		
d-Limonene, dms ... kilo	.70	.85
Linalool ex bois de rose oil, dms ... lb.	6.35	-
syn., 98-100% dms., f.o.b. works ... lb.	2.93	-
Linalool oxide, syn., 55-gal. dm. ... lb.	7.75	-
Linalyl acetate ex bois de rose oil, 90-92%, dms ... lb.	18.00	21.00
syn. 98-100%, dms., f.o.b. works. lb.	3.10	-
Linalyl benzoate, syn., 55-gal. dms. lb.	8.00	-
Linalyl cinnamate, syn., 55-gal. dms ... lb.	59.85	-
Linalyl formate, syn., 55-gal. dms. . lb.	7.75	8.50
Linalyl isobutyrate, syn., 55-gal. dms ... lb.	6.50	6.55
Lindane, 20% formulation, dms., divd ... gal	13.10	-
99.9% tech., dms., t.l., divd ... lb.	8.50	-
Linalyl propionate, syn., 55-gal. dms ... lb.	7.90	-
Linden flowers, with leaves, bls. ... lb.	.78	.85
without leaves, bls ... lb.	.90	1.15
Linseed meal (see Oils, Fats & Waxes market report).		
Linseed oil, (see Oils, Fats & Waxes market report).		
Linseed oil fatty acid, dist., dms ... lb.	.60	.67
tanks ... lb.	.53	.62
Litharge, com.l., powd., bgs., c.l., works ... lb.	.36½	.60
Lithium bromide, anhyd., dms., ton lots, divd ... lb.	6.27	-
soln., same basis ... lb.	4.00	-
Lithium carbonate, powd., bgs., c.l., t.l., divd ... lb.	1.50	-
Lithium chloride, anhyd., c.l., t.l., divd ... lb.	3.32	-
soln., dms., c.l., t.l., divd ... lb.	2.94	-
Lithium fluoride, dms., c.l., t.l., divd. lb.	4.90	-
Lithium hydride, c.l., t.l., divd 10,000 or more ... lb.	23.50	-
Lithium hydroxide, monohydrate, dms, c.l., t.l., divd ... lb.	1.93	-
Lithium hypochlorite, c.l., t.l., works lb.	1.07	-
Lithium metal, 1,000-lb lots or more, divd ... lb.	22.70	-
Lithium nitrate, tech, dms., 100-lb. lots ... lb.	3.25	-
Lithium stearate, bgs., c.l., frt. alld. . lb.	1.01	-
Lithium sulfate, anhydrous, t.l. divd lb.	3.09	-
Lithol red toner, barium, dms., frt. alld ... lb.	3.27	-
calcium, dms., same basis ... lb.	3.50	-
Lithol rubine toner (red 57), resinated, dms., frt. alld ... lb	5.60	-
Locust bean gum, powd, bgs. ... lb.	6.00	6.75
2,4-Lutidine, dms., t.l., frt. equald. kilo	5.75	-
Lycopodium, 50-lb dms ... lb.	8.00	10.00
1-Lysine monohydrochloride, feed grade, 10,000 lbs. divd ... lb.	1.35	1.40

M

Mace, East Indian, siftings, ... lb	4.95	5.00
Siauw #2 ... lb.	5.60	5.75
Magnesia, tech., light, neoprene-grade, bgs, c.l., t.l., works lb	.75	.81
Magnesia, syn., tech, chemical-grade, bulk, c.l., t.l. works ... ton	330.00	-
bags, c.l., t.l., same basis ... ton	365.00	-
deadburned, bulk, same basis ... ton	392.00	-
bgs., same basis ... ton	409.00	-
Magnesia, nat., tech, heavy, 85%, 150 mesh, bulk, c.l., t.l., f.o.b. Nev. ... ton	232.00	-
90%, 325 mesh, same basis ... ton	265.00	-
Magnesium bromide, 80-lb. dms., hexahydrate ... lb	2.50	-
Magnesium carbonate, light, tech., bgs., c.l., t.l., works, frt. equald ... lb.	73	.75
USP, lite bgs., c.l., same basis .. lb	.74	.80
USP, heavy, bgs., c.l., same basis . lb.	.83	-
Magnesium chloride, anhyd., 92%, flake or pebble dms., c.l., works ... lb.	.12¾	.15
Magnesium chloride, hydrous, 99%, flake, bgs., c.l., works ... lb	.14½	-
Magnesium gluconate, 100-lb. dms. f.o.b. works, E. ... lb.	4.25	-
Magnesium hydroxide, NF, powd., dms., c.l., t.l., works frt. equald ... lb.	.78	-
Magnesium lauryl sulfate, tanks, f.o.b. works ... lb	.22	.26
Magnesium metal, 99.8%, ingots, 10,000-lb. lots or more. f.o.b Freeport, Tex. ... lb.	1.53	-
die casting alloys ... lb.	1.29	1.33
Magnesium nitrate, tech., flake. 250-lb. dms., t.l., works ... lb.	.32	-
Magnesium oxide, USP, light, bgs, c.l., works, frt. equald ... lb.	1.65	-
heavy, dms, c.l., same basis. ... lb.	1.54	-
Magnesium oxide, tech. (see Magnesia).		
Magnesium phosphate, tribasic, tech. 60-lb. bgs., f.o.b. ... lb.	1.00	-
Magnesium silicate (see Talc).		
Magnesium silicofluoride, bgs., c.l., t.l. works ... lb.	.1645	.187
Magnesium stearate, bulk, t.l. ... lb.	.95	1.35
Magnesium sulfate 10% Mg. (opsom salts), tech. bgs., t.l., works ... lb.	.14	-
bulk, same basis ... lb.	.13	-
USP, cryst., bgs., same basis . lb.	.13½	-
USP, cryst., bulk, same basis . lb.	.14½	-
Magnesium sulfate, 17% Mg, (synthetic monohydrate), tech. bgs. t.l., works ... lbs.	.80	-
CP, same basis ... lbs.	1.25	-
Magnesium sulfate, anhydrous, CP bgs., t.l., works ... lbs.	1.75	-
Magnesium sulfate trihydrate, tech., bgs., t.l., works ... lb.	.48	-
Magnesium trisilicate, USP, powd., lb. dms. 5,000-lb. lots ... lb.	.38	-
USP, micronized powd., dms., 375-lb. lots ... lb.	.63	-
Malathion, tech., dms., t.l., works. . lb.	1.62	-
Maleic acid, cryst., powd., drums, 100 kilos, f.o.b. ... kilos	3.20	-
drums, tons, f.o.b. ... kilos	2.80	-
Maleic anhydride, bgs., t.l., works, frt. equald ... lb.	.55	-
tanks, works, frt. equald ... lb.	.53	-
Malic acid, purif. and food grades. 50-lb. bgs., t.l., c.l., divd ... lb.	.81	-
Mandarin oil (see Tangerine oil, Italian).		
Mandelic acid, dms., 1,000 kilo lots ... kilo	8.00	10.00
Manganese acetate, dihydrate, dms., divd ... lb.	.49½	-
tetrahydrate, dms., t.l., divd. ... lb.	.48	-
Manganese borate printing ink drier. lb.	1.68	-
Manganese borate, tech., dms ... lb.	.80	-
Manganese carbonate, chemical grade, 46% Mn. bgs., 20,000-lb. lots or more, works. ... lb.	1.05	-
Manganese chloride, anhyd., dms., 20,000-lb. lots or more. ... lb.	.61	-
Manganese dioxide, nat., African, grd., 74%-76% MnO_2, 100-lb. bgs., l., works ... ton	200.00	300.00
84% MnO_2, same basis ... ton	250.00	[illegible]
Manganese dioxide, syn., cryst., battery grade, 90%-92% MnO_2, 100-lb. bgs., c.l., works. . lb.	.70	-
chemical, ferrite grade, same basis ... lb.	.49	-
Manganese gluconate, FCC grade, 100-lb dms., f.o.b. works. . lb.	3.50	-
Manganese hydrate dms., divd. ... lb.	.35	-
Manganese hypophosphite, NF, dms, ... lb.	8.75	-
Manganese metal, electrolytic, No. 1 chip, bulk, c.l., works. ... lb.	[illegible]	[illegible]
dms., c.l., works ... lb.	[illegible]	[illegible]
Manganese naphthenate, liq., 6% Mn, dms., divd ... lb.	[illegible]	[illegible]

Manganese resinate, fused, 3½% Mn. dms., frt. alld ... lb.	.34¼	-
precip. 6½-7% Mn. dms ... lb.	.42	-
Manganese sulfate, fertilizer grade, run-of-pile, 75%-78% $MnSO_4$, 25 kilo bgs., 50-ton cars, divd E. of Miss. ... ton	280.00	-
bulk, hopper cars, same basis .. ton	245.00	-
Manganese sulfate, 28% Mn, gran., bgs., c.l., t.l., works ... ton	330.00	-
Manganese tallate, liq., 6% Mn, dms., frt. alld ... lb.	.60	-
Mannitol, coml., powd., dms., t.l., works ... lb.	3.02	-
Marjoram, French ... lb.	.86	.89
Egyptian ... lb.	.61	.82
MBT (see 2-Mercaptobenzothiazole).		
MBTS (see Mercaptobenzothiazyl disulfide).		
MDI (see Diphenylmethane 4,4,-di-isocyanate)		
Melamine, bgs., c.l., t.l., 40,000-lb. min., f.o.b. works ... lb.	.51½	.59½
bulk, c.l., t.l., same basis ... lb.	.50	.58
Melamine-formaldehyde resin, g.p., t.l. frt. alld ... lb.	.55	.60
molding compounds, same basis ... lb.	.46½	-
Menhaden oil, crude, tanks, works Atlantic Coast ... lb.	.11	-
Gulf ports, same basis ... lb.	.12	-
Menthol, nat., USP, Brazilian large and regular crystals, spot, cs., bulk ... lb.	6.75	7.50
syn., USP, racemic, 100-450 lbs. lb.	9.00	-
2-Mercaptobenzothiazole, bgs., t.l., works, frt. alld ... lb.	1.25	1.55
Mercaptobenzothiazyl disulfide t.l., dms., works, frt. alld ... lb.	1.33	1.66
Mercuric chloride NF, gran., powd., 100-lb. dms., f.o.b. works.. lb.	6.60	-
Mercuric oxide, red, purif., 100-lb. dms., f.o.b. works ... lb.	7.00	7.25
tech., 100-lb. dms., same basis ... lb.	5.50	7.00
yellow, NF, 100-lb. dms., same basis ... lb.	7.00	7.25
tech., 100-lb. dms., same basis ... lb.	5.50	7.50
Mercurous chloride (see Calomel).		
Mercury, ammoniated (see White precipitate USP XV).		
Mesityl oxide, tanks, divd ... lb.	.46	-
Methacrylic acid, glacial, 99%, dms., t.l., frt. equald ... lb.	.87	-
tanks, works, frt. equald ... lb.	.78	-
d-Methamphetamine hydrochloride, dms ... lb.	12.00	16.00
dl-Methamphetamine hydrochloride, dms ... lb.	4.50	7.00
Methanol, syn., barges, f.o.b producing point, Gulf Coast ... gal.	.28	-
Methenamine (see Hexamethylenetetramine).		
Methionine hydroxyanalogue, dry, 86% activity t.l., frt. alld ... lb.	.86	-
liquid, 88% activity, t.l. frt. alld ... lb.	.88	-
dl-Methionine (see Racemethionine)		
Methoxychlor, 50% wettable powder, dealers, dms ... lb.	2.05	-
Methyl abietate, non-ret. dms., c.l., divd. E. ... lb.	9.40	-
Methyl abietate, hydrogenated, non-ret. dms., l.c.l., same basis ... lb.	10.00	-
Methyl acetoacetate, East, divd. bulk ... lb.	.85	-
Methyl acrylate, tanks, divd ... lb.	68.50	-
Methyl alcohol (see Methanol)		
Methyl amyl alcohol, tanks, divd ... lb.	.55	-
Methyl n-amyl ketone, tks., divd ... lb.	.54½	-
Methyl anthranilate, tech., dms., f.o.b. ... lb.	1.41	2.65
Methyl benzoate, dms., t.l. ... lb.	.25	-
99.9%, perf. grade, dms., t.l. ... lb.	1.65	-
Methyl bromide, dist., tanks, 140,000 lbs. min., frt. alld ... lb.	.56¼	-
Methylcellulose, premium, USP (visc. 400 through 4,000 cps) 50 lb. bags, tl., cl., 30,000 lb., min., divd., zone 1 ... lb.	2.73	-
Methylcellulose, premium USP (visc. 15 cps) 50 lb. bags, tl., cl., 30,000 lbs., divd., zone 1. . lb.	2.85	-
Methylcellulose, (visc. 400 through 4,000 cps) 50 lb. bgs., tl., cl., 30,000 lbs., divd., zone 1. . lb.	2.24	-
Methylcellulose (visc. 15 to 25 cps) 50 lb. bags, tl., cl., 30,000 lb. min., divd., zone 1 ... lb.	2.52	-
Methyl chloride, indust. bulk, tanks, f.o.b. works ... lb.	.28	-
Methyl chloroform (see 1,1,1-Trichloroethane).		
Methyl cinnamate, dms. ... lb.	4.65	-
Methyl p-cresol, dms. ... lb.	6.00	-
Methyl ethyl ketone, tanks, divd, E.. lb.	.235	-
Methyl eugenol, 25-lb. cns. ... lb.	3.55	3.80
Methyl formate, pure, non-ret. dms., works ... lb.	.41	-
tanks, same basis ... lb.	.29	-
tech., tanks, works ... lb.	.31	-
Methyl heptanol, syn., 55-gal. dms. lb.	14.50	-
Methyl heptenone, pure, dms ... lb.	7.30	-
Methyl heptin carbonate, dms ... lb.	45.00	-
Methyl p-hydroxybenzoate (see Methylparaben)		
Methyl ionone, std., dms. ... lb.	7.30	9.40
Methyl isoamyl ketone, tanks, divd. E. ... lb.	.51	-
Methyl isobutyl carbinol (see Methyl amyl alcohol).		
Methyl isobutyl ketone, tanks, divd. lb.	.35	-
divd. zone 2 (Calif.) ... lb.	.38	-
divd. zone 3 (W. of Rockies, excluding Calif.) ... lb.	.41	-
Methyl isoeugenol, 25-lb. cns. ... lb.	6.60	10.40
Methyl methacrylate, tanks, divd .. lb.	.62	-
Methyl naphthyl ketone, cryst., dms ... lb.	14.00	-
Methylparaben, USP, 500 kilograms, f.o.b. ... kilo	10.14	-
tech., 500 kilograms, f.o.b. ... kilo	9.70	-
Methyl parathion, tech., 80%, dms., frt. alld. E. ... lb.	1.65	-
Methyl phenylacetate, dms. ... lb.	3.60	5.40
N-Methyl 2-pyrrolidone, tanks, f.o.b. plant ... lb.	1.32	-
dms., c.l., t.l., same basis .. lb.	1.40	-
Methyl rosaniline chloride, USP, 1-lb. cans ... lb.	5.50	-
Methyl salicylate, NF, 1000-lb. dms., t.l., frt. alld ... lb.	1.79	1.94
Methyl violet (see Methyl rosaniline chloride).		
Methyl violet toner, molybdated, PMA, bbls., divd. E. of Rockies. lb.	3.25	-
Methyl violet toner, tungstated, PTA, bbls., same basis ... lb.	4.70	5.20
4,4,-Methylene dianiline (p,p-diaminodiphenyl methane) crude, dms., t.l., f.o.b. ... lb.	1.75	-
purif., flake, same basis ... lb.	2.25	-
Methylene di-p-phenylene di-isocyanate (see diphenylmethane 4,4,-di-isocyanate).		
Methylene chloride, tanks, 4,000 gal.-min., consumers, divd ... lb.	.35	-
Methylpentanediol (see Hexylene glycol).		
Methylphenylpryazolone (see 1-Phenyl-3-methyl-pyrazolone-5).		
a-Methylstyrene, f.o.b. shipping pt.. lb.	.44	-
p-Methylnaphthalene, bulk, works. gal.	1.38	-
Methylthionine chloride (see Methylene blue).		
Mica, dry-grd., joint cement, plastic, 50 lb., bgs., c.l., works ... lb.	.07½	-
dry-grd., roofing, 20 to 80 mesh. works ... lb.	.07	-
paint or lacq., wet-grd., 325-mesh, bgs., c.l., f.o.b. works ... lb.	.16¾	-
rubber, bgs., c.l., f.o.b. works ... lb.	.16¾	-
wallpaper, bgs., c.l., f.o.b. works. lb.	.22	-
Microcrystalline wax, petroleum, coating grades, FDA, tanks, works ... lb.	.36½	.46½
laminating grades, FDA, tanks, works ... lb.	.38½	.48
Mineral oil, white, 50-65 vis., USP light tanks, refy ... gal.	2.38	-
65-75 vis., tanks, refy ... gal.	2.42	-
80-90 vis., tanks, refy ... gal.	2.45	-
145-155 vis., tanks, refy ... gal.	2.53	-
USP 180-190 vis., tanks, refy ... gal.	2.54	-
200-210 vis., tanks, refy ... gal.	2.56	-
340-350 vis., tanks, refy ... gal.	2.65	-
Mineral spirits, petroleum, odorless, tanks, New Jersey ... gal.	1.83	1.88
Houston, Tex. ... gal.	1.78	1.79
Mineral spirits, petroleum, regular, tanks, New Jersey ... gal.	1.41	1.49
Houston, Tex. ... gal.	1.41	1.43
Molybdate orange, bbls ... lb.	1.52	1.95
Molybdenum metal, com.l., powd., 99.8%, dms., works ... lb.	13.50	-
Molybdenum trioxide, CP, dms., works, 24,000 lbs. or more. lb.	5.25	-
tech., chemical, dms., 24,000 lbs. or more, basis ... lb.	2.65	2.85
tech. metallurgical, dms. same basis lb.	2.65	2.85
Molybdic acid (See Ammonium Dimolybdate)		
Monoammonium phosphate, fert. grade, min. 13% N. 52% P. bulk, c.l., f.o.b. Fla. works ... ton	155.00	-
Monoammonium phosphate, tech., bgs., c.l., t.l., works, frt. equald ... 100 lbs.	54.00	-
food grade, bgs., c.l., t.l., same basis ... 100 lbs	59.25	-
Mono-tert-butyl-m-cresol, bulk, t.l. . lb.	1.69	-
Monobutylamine, bulk, divd ... lb.	96	1.00
Monochloroacetic acid, purif. (see Chloroacetic acid, mono).		
Monochlorobenzene, tanks, f.o.b. . lb.	.42½	-
Monoethanolamine, tanks, frt. alld E. ... lb.	.43	.46
Monoethylamine, 70% aqueous tanks, frt. prepaid, 100% basis ... lb.	.94	-
anhyd., tanks, same basis ... lb.	.92	-
Monoisopropanolamine, dms., c.l., frt alld E. ... lb.	.76	-
tanks, same basis ... lb.	.66	-
Monoisopropylamine, anhyd., dms., c.l., frt. prepaid ... lb.	.79	-
tanks, same basis ... lb.	.76	-
Monomethylamine, anhyd., tanks, contained basis frt. equald ... lb.	.54½	-
25% soln., tanks, frt. alld. 100% basis ... lb.	.57	-
40-60% soln., tanks, frt. equald 100% basis ... lb.	.63½	-
Monopotassium glutamate, dms., 990 lb. or more, frt. alld ... lb.	2.50	-
Monosodium glutamate, 50-lb. bgs., c.l., t.l., divd ... lb.	.76	.80
100-lb. drums, c.l., t.l., divd ... lb.	.85	-
Monosodium phosphate (see Sodiumphosphate, monobasic).		
Montan wax, crude, imp., German . lb.	.55	.57
dom., Calif., bgs., c.l., t.l., f.o.b. shipt. pt. ... lb.	.61	-
refd., dom. Calif., same basis ... lb.		
Morphine alkaloid, NF, 25 k lots .. kilo	1018.00	-
Morphine sulfate, USP, 25 k lots .. kilo	850.00	-
Morpholine, dms., c.l., frt. alld. E. .. lb.	1.02	-
tanks, frt. alld., E. ... lb.	.94	-
Muriatic acid (see Hydrochloric acid).		
Musk. syn., ambrette, 25-lb. cns. .. lb.	6.00	7.00
Musk. syn., ketone, dms ... lb.	10.75	-
Musk. syn., xylol, dms ... lb.	3.60	-
Mustard oil, syn. (see Allyl isothiocyanate).		
Mustard seed, Brown No. 1 ... lb.	.24	-
Canadian No. 1 Yellow ... lb.	.25	-
Oriental No. 1 bgs ... lb.	.25	-
Myrcia oil (see Bay oil).		
Myristic acid, coml., pure, t.l., bgs. . lb.	1.30	-
tanks ... lb.	1.12	-
Myristica oil (see Nutmeg oil).		
Myrrh gum, bgs. ... lb.	2.25	-

N

Naphtha, high solvency (see Solvent naphtha, petroleum).		
Naphtha, petroleum, cleaners (see Cleaner's naphtha).		
Naphtha, VM&P, petroleum, tanks, New Jersey and New York ... gal.	1.29	1.34
Houston, Tex. ... gal.	1.20	-
Naphthalene, crude, dom., 78°, tanks, works ... lb.	.22	-
Naphthalene, phthalic anhydride grade, tanks, works ... lb.	.23½	-
Naphthalene, petroleum, 80°C., f.o.b. ... lb.	.80	.82½
Naphthalene, refd., balls, flakes, wholesalers, jobbers, dms., works ... lb.	.65	.77
Naphthenic acid, crude, bulk, works lb.	.16	.62
refined, 220 acid, same basis .. lb.	.75	1.00
a-Naphthol, ground, dms., t.l. divd. lb.	1.81	-
b-Naphthol, tech. flake, 80-lb. bgs., c.l., works ... lb.	1.10	
Naphthol arylide red toner deep shades, bbls ... lb.	9.50	-
light shades, bbls ... lb.	7.75	-
2-Naphthol-3,6-disulfonic acid, disodium salt (see R salt).		
1-Naphthol-5-sulfonic acid (see L-acid).		
1-Naphthol-5-sulfonic 8-amino acid (see S acid).		
Naphthylamine sulfonic mixed acid (see Cleve's acid).		
a-Naphthylamine, tanks, f.o.b. works ... lb.	2.10	-
1-Naphthylamine-5-sulfonic acid (see Laurent's acid).		
2-Naphthylamine-4,8 disulfonic acid (see Cassella acid).		
2-Naphthylamine-1-sulfonic acid (see Tobias acid).		
Neatsfoot oil, 20°F, t.l., f.o.b. works dms ... lb.	.52	-
tanks, f.o.b. works ... lb.	.47	-
30°F, t.l., f.o.b. works ... lb.	.52	-
tanks, f.o.b. works ... lb.	.44	-
40°F, dms., t.l., f.o.b. works ... lb.	.48	.49
tanks, f.o.b. works ... lb.	.39	-
Delivered prices apply on shipments within 300-mile radius of Philadelphia, Pa.; other areas, 1¼c. higher; Texas, 2c. higher and West Coast 3c. higher.		
Neomycin sulfate, USP, non-sterile, dms., 50-kilo. lots, activity basis, divd ... kilo.	75.00	-
Neopentyl glycol, slurry, 90%, c.l., t.l., divd ... lb.	.522	-
powder, flake, bgs. t.l., divd ... lb.	.598	
Nerol, tech., dms ... lb.	5.30	5.75
perf. grade, dms ... lb.	4.60	6.00
Neroli oil, Tunisian, bots ... kilo	18,000.00	-
Nerolidol syn. 55-gal. dms ... lb.	7.05	-
Nerolin, Bromelin ... kilo	7.22	-
Niacinamide, USP, t.l. dms ... kilo.	8.00	-
Niacin NF, dms., 5,000 kilos or more, divd ... kilo	7.50	-
feed-grade, 98-99.5%, bgs., same basis ... kilo.	5.10	5.50
Nickel acetate, dms., 5,000-lbs. to t.l., divd. E. ... lb.	1.82	-
Nickel carbonate, dms., bgs., 5,000-lbs. to t.l., divd. E. ... lb.	3.45	-
Nickel chloride, bgs., 10,000-lbs. to t.l., divd. E. ... lb.	1.19	-
Nickel fluoborate, liq. conc., dms., t.l., divd. E. ... lb.	1.25	-
Nickel metal, electro cathodes, cs., works ... lb.	3.45	-
Nickel nitrate, dms., bgs., t.l., divd. E. ... lb.	1.18	-
Nickel oxide, 75%-78% Ni, dms., 500-lb. lots, f.o.b. works ... lb.	2.60	-
Nickel sulfate, bgs., t.l., divd. E. ... lb.	.80	.90
Nicotinic acid (see Niacin).		
Nicotinamide (see Niacinamide).		
Nitric acid, 36° Be., 38°Be, 40°Be, 42°Be. tanks, c.l., works NF, 100% basis ... ton	195.00	-
94½% to 98% HNO_3, tanks, works, 100% basis ... ton	260.00	-
o-Nitroaniline, flake, dms., t.l works ... lb.	1.51	-
molten, refd., tanks, works ... lb.	1.44	-
molten, tech., works ... lb.	1.37	-
o-Nitroaniline, orange toner, bgs., frt. alld ... lb.	1.90	-
p-Nitroaniline, dms., c.l., t.l., 30,000 lb. min., works ... lb.	1.63	-
o-Nitroanisole, 100-kilo lots ... kilo	8.75	-
Nitrobenzene, tanks, f.o.b. ... lb.	.33	.34
o-Nitrochlorobenzene, dms., t.l., c.l., f.o.b. ... lb.	.82	-
tanks, same basis ... lb.	.74	-
2-Nitro-p-cresol, tech., dms., t.l., frt. alld ... lb.	1.75	-
Nitroethane, tanks, divd. E. ... lb.	2.50	-
Nitrogen solutions, direct application, over 32% N, and mgf. type, works ... unit-ton.	1.20	-
direct application, 19-32% N ... unit-ton.	1.28	1.46
Nitrogenous sewage sludge, processed, bulk, f.o.b. Chicago ... unit ton.	4.10	-
NOTE: Price is per unit NH_3 plus $1, per unit a.p.a. bulk, f.o.b. producer's works, Chicago.		
Nitrogenous tankage, processed, bulk, per unit-ton NH_3, f.o.b. Carrollville, Wisc. ... unit ton	7.00	-
f.o.b. Forbes, Me. ... unit ton	6.75	-
expanded, bulk, c.l., per unit-ton N, f.o.b. Forrestdale, R.I. unit ton	8.35	-
Nitromethane, dms., t.l., divd, E. ... lb.	2.37	-
o-Nitrophenol, dms., f.o.b. works .. lb.	1.00	-
p-Nitrophenol, dms., c.l., f.o.b. works ... lb.	1.06	1.45
2-Nitropropane, tanks, frt. alld. E. ... lb.	.55	-
m-Nitrotoluene, tech., dms., frt. alld. lb.	1.15	-
o-Nitrotoluene, dms., c.l., f.o.b. ... lb.	.65	-
tanks, same basis ... lb.	.48	.57
p-Nitrotoluene, tech. dms., c.l., works ... lb.	.83	.85
tanks, works ... lb.	.70	-
Nonylphenol, tanks, f.o.b. E. of Rockies, min, frt. alld ... lb.	.49	.53½
Norephedrine hydrochloride (see Phenylpropanolamine hydrochloride)		
Nutmeg oil, dist., East Indian, NF, dms ... kilo	27.00	28.50
Nutmegs, East Indian, whole ... lb.	3.15	-

O

Ochre (see Iron oxide, yellow, nat.)		
Ocotea cymbarum oil dms ... kilo	5.00	-
Ocotea, Chinese 90% ... kilo	5.25	-
1-Octadecanol, syn., tanks, f.o.b. .. lb.	.43½	-
l-Octanol, syn., tanks, f.o.b. ... lb.	.70	-
n-Octane, 97% min., tanks, f.o.b. Houston, Tex. ... gal.	6.25	-
Octyl alcohol, perfumer's grade, bots., cns ... lb.	1.40	1.75
n-Octyl, n-decyl phthalate, tanks, divd ... lb.	.33½	.37
tert-Octylamine, dms., c.l., t.l., works.	2.60	-
Octylphenol, molten, f.o.b. works ... lb.	.75	.76½
Oiticica oil, liq. dms ... lb.	.40	-
tanks ... lb.	.32	-
Oleic acid, dbl.-dist. (white), dms .. lb.	.46	.59
tanks ... lb.	.38	.44
Oleic acid, s.d. (red) dms ... lb.	.43	.49
tanks ... lb.	.35	.41

CHEMICAL PRICES

WEEK ENDING OCT 3, 1986

Oleum (see Sulfuric acid, fuming).		
Olibanum gum, tears, bgs. ... lb.	2.10	-
Olive oil, edible, Spanish, dms ... gal.	8.00	-
Italian B-type ... gal.	5.35	-
Olivine, crude, works ... ton	12.00	-
20 mesh. works ... ton	15.00	-
100 mesh. works ... ton	20.00	-
Opium. USP, gran. powd. 25-kilo lots ... kilo	125.00	-
Orange oil, expressed, USP, Calif., dms., f.o.b. plant ... lb.	1.20	-
expressed Valencia, dms ... lb.	1.00	1.20
Calif., dist., cns. f.o.b. plant ... lb.	.40	-
Florida, dms ... lb.	.50	.55
Brazilian ... kilo	1.20	-
West Indian, bitter, NF X, cns., dms ... lb.	6.50	-
Orange peel, bitter, Haitian bls ... lb.	.38	-
Oregano, Greece, 30M ... lb.	2.80	-
Turkey ... lb.	2.80	-
Mexico ... lb.	1.05	-
Origanum oil, Spanish, cns ... kilo	36.00	-
Orris root, Florentine, bls. ... lb	4.00	-
powd., bbls., bxs ... lb.	4.60	5.00
Verona bls ... lb.	3.00	-
powd., bbls., bxs ... lb.	4.60	5.00
Ouricury wax, refd., pure, bgs ... lb.	3.25	3.35
Oxalic acid, bgs., c.l., works ... lb.	.44	-
b-Oxynaphthoic acid dms. works, tech ... lb.	2.55	-
Oxyquinoline base, pure, 1,000 lbs., frt. alld ... lb.	8.00	-
Oxyquinoline sulfate, 100 lbs. frt. alld ... lb.	4.00	-

P

Palladium metal, works. ... Troy-oz.	146.00	-
Palm oil, (see Oils, Fats & Waxes Market Report)		
Palm oil acid, dbl-dist. dms ... lb.	.31½	-
tanks ... lb.	30	-
s.d., dms ... lb	.42	.45
tanks ... lb.	35	-
Palm kernel oil, bulk, c.i.f., U.S. ports ... lb.	10	.10½
Palmarosa oil, Indian dms ... kilo	36.00	-
Palmitic acid, 90%, tech., bags ... lb.	.53	-
tanks ... lb.	.51	-
Papaverine hydrochloride, NF powd., imp. bulk ... kilo	56.00	-
Paprika, Hungarian, 100 AU bgs. .. lb.	.80	-
Spanish, 110 AU bgs. ... lb.	.90	-
Paraffin, fully-refd., 127-130 F., ASTM, tanks, refy	.29	.35
130-135 F., ASTM, tanks, refy.	.33½	.39
140-145 F., ASTM, tanks, refy.	.35	.41½
150-165 F., ASTM, tanks, refy.	.41½	.46
slack wax, 5% oil, tanks refy ...	.19	-
12% oil, tanks refy ...	.21	-
20% oil, tanks refy ...	.16	-
AMP temperatures are an arbitrary 3F higher than ASTP.		
Paraformaldehyde, 91%, flake, bgs. c.l., t.l., divd ... lb.	.29½	-
95%, powd., bgs., c.l., t.l. divd. lb.	.39½	-
Paraldehyde, tech., 98%, 55-gal. dms., t.l., divd. E. ... lb.	.76½	-
tanks, divd. E. ... lb.	.58½	-
Parathion, ethyl, dms., frt. alld ... lb.	1.75	-
Parathion methyl (see Methyl parathion).		
Para toner red, bbls ... lb.	3.75	-
chlorinated. (red 4) kgs ... lb.	3.75	-
Patchouli oil, Indonesian., dms ... kilo	18.50	20.00
Patchouli oil, Chinese ... kilo	19.00	20.00
Peach kernel oil, USP (see Apricot kernel oil).		
Peanut meal (see Oils, Fats & Waxes market report).		
Peanut oil (see Oils, Fats & Waxes market report).		
Pectin dom., NF, citrus, powd., 100-kilo lots divd ... lb.	3.30	3.70
Pelargonic acid, nat., tanks, min. frt. alld ... lb.	.70	-
syn., tanks, f.o.b. frt. alld ... lb.	.70	-
Penicillin, potassium, non-sterile, 200-billion-unit lots, ... billion units	25.00	30.00
Penicillin, procaine, sterile 50-billion-unit lots, bulk ... billion units.	36.00	-
Pennyroyal oil, dms. ... lb.	5.90	-
Pentachlorophenol, 50-lb. bgs., t.l., f.o.b. Wichita, Kan. ... lb.	.55	-
Pentaerythritol, tech., bgs., c.l., f.o.b., frt. alld ... lb.	.71	.72
Pentaerythritol, di- and tri-isomers (see Dipentaerythritol and Tripentaerythritol).		
Pentaerythritol triacrylate, t.l. dms., f.o.b. works ... lb.	1.50	-
Pentobarbital, dms., 100 lbs. or more, frt. alld ... lb.	7.00	-
Pentobarbital-sodium, dms., 100 lbs. or more, divd ... lb.	14.00	-
Pentylene tetrazol, NF, dms., 200-kilo lots ... kilo	32.00	-
Pepper, black, Brazilian, bgs ... lb.	2.00	-
Lampong, bgs ... lb.	2.03	-
Malabar, bgs ... lb.	2.00	-
Tellicherry, bgs ... lb.	2.30	-
Pepper, red Chinese Fukien rice bgs lb.	.89	-
Hainan, bgs ... lb.	1.00	-
Ling, bgs ... lb.	.76	-
Indian, S-4, bgs ... lb.	.70	-
Pakistan, dundicuts, bgs ... lb.	.43	-
Pepper, white, Muntok, bgs ... lb.	2.80	-
Peppermint leaves, imp., dms ... lb.	2.65	-
Peppermint oil, Madras ... lb.	14.00	-
Midwest ... lb.	16.00	-
Willamette ... lb.	11.00	-
Yakima ... lb.	8.00	-
syn., dms, f.o.b. works ... lb.	7.00	8.00
Brazilian ... kilo	6.60	-
Chinese ... kilo	6.00	-

CHEMICAL PRICES

WEEK ENDING OCT 3, 1986

Perchloroethylene, dry cleaning grade, distr., tanks, divd. ....lb.	.28½	-
Indust., grade, consumers, tanks, divd. ....lb.	.31	-
Peri acid. dms. ....lb.	2.55	-
Permanent red 2B, (red 48), calcium salts, dms., frt. alld. ....lb.	5.25	-
barium salts, same basis ....lb.	5.25	-
Peru balsam, f.o.b. ....lb.	3.25	-
Petitgrain oil, Paraguay ....lb.	5.00	-
Petrolatum, USP, snow white, dms., c.l., refy ....lb.	.375	-
tanks, refy ....lb.	.310	-
USP, soft white, dms., c.l., refy. ....lb.	.375	-
tanks, refy ....lb.	.310	-
USP, lily white, dms., c.l., refy. ....lb.	.370	-
Petrolatum, USP, Lilly white, tanks, refy ....lb.	.305	-
USP, cream, dms., c.l., refy ....lb.	.365	-
tanks, refy ....lb.	.30	-
USP, soft yellow, dms., c.l., refy. ....lb.	.350	-
tanks, refy ....lb.	.285	-
USP, amber, dms., c.l., refy. ....lb.	.345	-
tanks, refy ....lb.	.280	-
Petroleum pitch (see Asphalt, petroleum).		
Petroleum sulfonate, 60-62%, sulfonic cont., HMW, bulk, works ....lb.	.48¾	.49
MMW, same basis ....lb.	.49	-
LMW, same basis ....lb.	.49	.49¼
Prices for 51% sulfonic content 2c per lb. lower on corresponding molecular wts.		
Phenacetin USP, powd, 200-lb. dms., 1,000-lb. lots, divd ....lb.	2.20	-
100-lb. dms., 1,000-lb. lots, divd. ....lb.	2.22	2.46
p-Phenetidine, dms., c.l, f.o.b. ....lb.	2.00	-
Phenobarbital, USP, dms., 500-kilo lots, f.o.b. works ....kilo	19.50	-
Phenobarbital-sodium, NF, 500-kilo lots, f.o.b. works ....kilo	27.00	-
Phenol, syn. tanks, frt. equald. ....lb.	.25	.29
p-Phenolsulfonic acid, 65% sol'n., dms., c.l., fob works ....lb	.64	-
tanks, same basis ....lb	.58	-
Phenothiazine, indust. grade, 50-lb. bags, c.l., f.o.b works ....lb.	2.33	-
purif. grade, same basis ....lb.	2.69	-
Phenyl acetate, dms., 100-lb. lots, works ....lb.	1.04	-
Phenylacetic acid, pure cryst., 25-lb. cns ....lb.	4.50	-
dl-Phenylalanine, dms., 25-kilo lots ....kilo.	84.00	-
1-Phenyl-3-carbethoxy pyrazolone-5, dms 200-lb. lots, divd. E. ....lb.	3.45	-
m-Phenylenediamine, cast, dms., c.l., t.l. f.o.b. works ....lb.	2.07	-
o-Phenylenediamine, flaked, dms., t.l., f.o.b works ....lb.	3.25	-
p-Phenylenediamine, flaked, dms., f.o.b. works ....lb.	4.00	-
Phenylephrine hydrochloride, USP 100-kilo lots or more ....kilo.	175.00	185.00
Phenylethyl acetate, dms ....lb.	3.35	-
2-Phenylethyl alcohol, NF, dms ....lb.	2.10	2.20
b-Phenylethylamine, dms, 30,000 lbs. or more, frt. alld ....lb.	1.50	-
Phenylethylphenyl acetate, 25-lb. cns ....lb.	5.50	6.90
Phenylglyconic acid (see Mandelic acid)		
Phenylhydrazine, 99% min, dms ....lb.	3.50	-
1-Phenyl-3-methyl-5-pyrazolone, dms., 250-lb. lots divd. E. ....lb.	1.80	-
o-Phenylphenol, dms., t.l., works ....lb.	1.35	2.00
p-Phenylphenol, bgs., t.l., 40,000 lbs. or more, works ....lb.	1.85	-
Phenylpropanolamine hydrochloride, 100-kilo dm. ....kilo	24.00	28.00
Phenylsalicylate, purif. cryst., dms., E ....lb.	2.75	-
tech, cryst. E ....lb.	2.25	-
flake, E. ....lb.	2.35	-
Phloxine toner (red 90), dms., frt. alld. ....lb.	1.95	2.05
Phosgene, 1-ton ret. cyls., 5 to 9-cyl quantities, works ....lb	.55	.67
Phosphate rock, Fla., land pebble, run of mine washed, 66-68% b.p.l. bulk c.l. mines ....ton	23.15	-
vessel, Tampa, same basis ....ton	28.00	-
Phosphoric acid, com'l. and tech. grades, 75% tanks, works ....100 lbs.	29.00	-
80% tanks, works ....100 lbs.	31.00	-
85%, NF, tanks, f.o.b. freight equald. ....100 lbs.	33.50	-
Food grade prices $2.00 above tech. grade.		
Phosphoric acid, agricultural grade, 52-54% a.p.a., tanks, works ....unit-ton	3.10	-
super, min. 70% a.p.a., same basis ....unit-ton	3.45	-
Phosphorus, white (yellow) solid dms., c.l., works, frt. equald ....lb.	1.00	-
tanks, works, f.o.b. works ....lb.	.91	-
Phosphorus oxychloride, tanks, frt. equald ....lb.	.40	-
Phosphorus pentasulfide, powd., dms., c.l., works ....100 lbs	50.00	-
tote bins, sellers ....100 lbs.	45.00	-
Phosphorus pentoxide, dms., t.l., works ....lb.	.82	-
Phosphorus sesquisulfide, dms., cns., c.l., works ....lb.	.38	-
Phosphorus trichloride, dms., c.l., works ....lb.	.40	-
tanks, works ....lb	.35	-
Phthalic anhydride, flake, c.l., t.l., dms., frt. equald ....lb.	.30	-
molten, tanks, same basis ....lb	.27	-
Prices 1-1½c. per lb higher on the West Coast		
Phthalimide, flake, works ....lb	.85	-
Phthalocyanine blue toner, red shade, bbls., frt. alld. E. of Rockies ....lb.	8.10	9.50
green shade, same basis ....lb.	6.40	8.50
resinated, bbls., same basis ....lb.	6.20	8.75

Phthalocyanine blue toner, water dispersable, bbls., same basis ....lb.	7.05	7.75
Phthalocyanine green toner, all grades, bbls., frt. alld. E. of Rockies ....lb.	8.10	10.10
Phthalocyanine green toner, resinated, bbls., same basis ....lb.	7.45	9.20
Phthalylsulfacetamide, dms., 500-kilo lots ....kilo.	6.61	-
Picolines, refd, mixed, bulk ....kilo	2.81	-
Picric acid, pure paste, 25-lb. ctns., c.l., dry basis, f.o.b. Charlotte, N.C. ....lb.	6.00	-
tech., paste, 25-lb. ctns., t.l., dry basis, f.o.b. Charlotte, N.C. ....lb.	5.00	-
Pigment green B, kgs ....lb.	2.20	-
Pilocarpine hydrochloride, USP, dms. ....kilo.	1,500.00	2,000.00
Pimento see Allspice		
Pimento leaf oil, dms. ....lb.	14.50	-
Pine oil, 80% min. alcohol content, bulk, f.o.b. works ....100 lbs	47.00	53.00
dms., c.l., t.l., same basis ....100 lbs	51.00	54.00
a-Pinene, perfume grade ....kilo	1.62	-
tech. grade ....lb.	.18	.23
b-Pinene, perfumery grade, tanks ....kilo	2.30	-
tech. grade, tanks ....lb.	.35	.40
Piperazine, anhyd., dms., t.l., frt. alld. E. ....lb.	1.80	-
Piperazine citrate, 36%, dms., 1,100-lb. lots, frt. alld ....lb.	2.25	2.35
Piperazine dihydrochloride, 53%, dms., t.l., frt. alld ....lb.	2.00	-
Piperazine hexahydrate, 44%, dms., 1,100-lb. lots, frt. alld. ....lb.	1.60	-
Piperazine phosphate, 42%, dms., t.l., frt. alld. ....lb.	1.80	-
Piperidine dist. 98% min., dms., c.l., t.l., works ....kilo.	6.92	-
Piperonyl butoxide dms., divd. E. ....lb.	5.00	-
Platinum, metal, works ....Troy oz.	602.00	-
Polycarbonate resin, pellets, nat., t.l., frt. alld ....lb.	1.84	1.88
Polyester resin, unsaturated, g.p., orthophthalic, bulk, tankcars, frt. alld ....lb.	.51	.53
isophthalic, same basis ....lb.	.56	.62
Polyethylene resin, high-density, blow molding, g.p., hopper cars, frt. alld. ....lb.	.43	.46
injection molding, g.p., hopper cars, frt. alld. ....lb.	.43	.46
extrusion, g.p., hopper cars, same basis ....lb.	.47	.48
wire and cable, nat., hopper cars, same basis ....lb.	.45	.49
wire and cable, black, same basis ....lb.	.55½	.57
Polyethylene resin, low-density, film liner, hopper cars, frt alld ....lb.	.36	-
clarity film, hopper cars, frt., alld. ....lb.	.37	-
pallet shrink film, hopper cars, same basis ....lb.	.35	-
extrusion coating, hopper cars, same basis ....lb.	.38	.42
g.p., hopper cars, same basis ....lb.	.38	.42
Polyethylene linear low-density g.p. resin	.36	.40
blown film resin	.40	.43½
cast film resin	.40	.45
Polyethylene resin, low-density injection molding, g.p., hopper cars, same basis ....lb.	.45	.48
line wire, CATV, power cable ....lb.	.647	-
wire and cable thermoplastic high-voltage, natural color, same basis ....lb.	.70	.74½
wire and cable, XLPE low voltage, 14% carbon black, same basis ....lb.	.67½	.72½
wire and cable jacketing, black ....lb.	.587	.667
Polymyxin sulfate, USP, bulk, 50-billion units min. ....million units	.52	-
Polyoxyethylene sorbitan monostearate, dms., 20,000-lb. lots, works ....lb.	.73	-
Polyoxyethylene sorbitan tristearate, dms., 20,000-lb. lots, works ....lb.	.73	-
Polypropylene resin, homopolymer, g.p., nat., t.l., frt. alld ....lb.	.45	.48
copolymer, med. impact, nat., same basis ....lb.	.50	.56
high impact, same basis ....lb.	.53	.60
Colored material 6c. per lb. higher for each grade.		
Polystyrene resin, cryst., nat., hopper cars, frt. alld. ....lb.	.48	-
impact, nat., hopper cars, same basis ....lb.	.51	-
high heat, high impact, nat., hopper cars, same basis ....lb.	.52	-
expandable beads (EPS), pkging grade, 1,000-lb. lots ....lb.	.69	-
modified, same basis ....lb.	.73	-
Polyvinyl alcohol, fully hydrolyzed, medium viscosity, bgs., t.l., divd ....lb.	1.00	1.06
partially hydrolyzed, medium viscosity, bgs., t.l., divd ....lb.	1.05	-
Polyvinyl chloride resin, g.p., homopolymer dispersion, bgs., t.l., divd ....lb.	.50	-
g.p. suspension, bulk, same basis ....lb.	.38	-
pipe grade, bulk, same basis ....lb.	.47	-
film grade, bulk, same basis ....lb.	.37	.47
Polyvinyl chloride, g.p. copolymer dispersion, same basis ....lb.	.58	.61
g.p. copolymer suspension, same basis ....lb.	.45	.49
Poppyseed, Dutch, bgs ....lb.	.59	-
Turkey, bgs ....lb.	.53	-
Potash agricultural (see Potassium muriate).		
Potash, caustic, liq., 45% basis, tanks, works ....100 lbs.	13.00	-
West Coast, 50% basis, tanks, ex terminal ....100 lbs.	18.06	-
reg. flake, 88-92%, 400-lb. dms., c.l., works ....100 lbs.	42.35	-
Potassium acetate, NF, gran., dms., t.l. works E ....lb.	.90	1.31
Potassium bicarbonate, tech., gran., bgs., c.l., works ....lb.	.31½	-
Potassium bicarbonate, USP, gran., dms., t.l. ....lb.	.72	-

Potassium bichromate, gran., 400-lb. dms., c.l., t.l., works ....lb.	.48	-
Potassium bifluoride, tech., dms., t.l., works, frt. equald ....lb.	.45	.49
Potassium bitartrate, NF, gran., powd., bgs ....lb.	.90	1.20
Potassium borohydride, powd. dms., 100-1,000 lbs., works ....lb.	18.00	20.00
Potassium bromate, gran., powd., 200-lb. dms., c.l., f.o.b. works ....lb.	1.06	-
Potassium bromide, NF., gran., dms., c.l. f.o.b. works ....lb.	1.12	-
Potassium carbonate, liq., 47% K_2CO_3, tanks, t.w., works ....100 lbs.	14.60	-
dms., c.l., t.l., works ....100 lbs.	20.65	-
calcined, 99-100% K_2CO_3, hopper cars or trucks, works ....100 lbs.	32.50	-
bgs., c.l., t.l., works ....100 lbs.	35.20	-
drums ....100 lbs.	36.40	-
Potassium carbonate, gran., purif., 400-lb. dms., 5-dm. lots ....lb.	.40	.46
Potassium chlorate, cryst., dms., c.l., works ....lb.	.14½	-
powd., dms., c.l., works ....lb.	.30	-
purif., gran., 325-lb. dms., f.o.b. shipping point ....lb.	.40	-
Potassium chloride, chemical grade, 99.95% KCl, bulk, c.l., f.o.b works ....ton	105.00	-
USP cryst. dms ....lb.	1.12	-
USP gran., dms ....lb.	.67	-
USP powd., dms ....lb.	.67	-
Potassium chloride, agricultural (see Potassium muriate).		
Potassium chromate, purif., cryst., dms., works ....lb.	.57	-
Potassium citrate, NF, gran., 200-lb. dms., frt. alld ....lb.	.93½	-
Potassium cyanide, dms., 20,000-lb. lots or more, f.o.b. works ....lb.	1.32	-
Potassium dichromate (see Potassium bichromate).		
Potassium fluoborate, tech., dms., c.l., t.l., works, frt. equald ....lb.	1.40	1.42
Potassium fluoride, anhyd., dms., t.l. ....lb.	1.68	-
Potassium gluconate, dms., t.l., f.o.b. works ....lb.	1.45	-
Price W. of Denver 4c. per lb. higher.		
Potassium guaiacolsulfonate, 300-lb. dms., 600 lbs. or more frt. equald ....lb.	2.10	-
Potassium hydroxide, tech. (see Potash, caustic).		
Potassium hydroxide, USP, pellets, 100-lb. dms., c.l., t.l., works, frt. equald ....lb.	1.29	1.31
Potassium iodide, USP, gran., cryst., dms., 1,000-lb. lots divd ....lb.	10.72	12.39
ACS grade truckload ....lb.	11.32	13.55
Potassium-magnesium sulfate, std., bgs., works ....ton	59.00	-
basis 40% K_2SO_4 and 55% $MgSO_4$ bulk, works ....ton	87.00	-
Potassium metabisulfate, gran., dms. t.l. ....lb.	.44	-
Potassium muriate, 60-62.4% min. K_2O, std., bulk, c.l., frt. equald., f.o.b. Sask., Canada ....ton	44.00	45.00
soluble, fine std., f.o.b. Sask. ....ton	46.00	47.00
coarse, f.o.b. Sask. ....ton	49.00	50.00
gran., f.o.b. Sask. ....ton	50.50	51.50
Potassium nitrate, fert. grade, std., 50-ton c.l., divd. SE. ....ton	267.00	274.00
prilled ....ton	277.00	284.00
tech., gran., bgs., c.l., min. 50 tons, divd ....ton	470.00	-
Potassium oxalate, neutral, tech., fine gran., powd., 300-lb. dm., frt. equald ....lb.	2.54	-
Potassium pentaborate, gran., bgs., c.l., works ....lb.	1.01	-
dms., same basis ....lb.	1.06	-
Potassium pentaborate powder 15c. per lb. higher.		
Potassium perchlorate, dms. c.l., works ....lb.	.78	-
Potassium permanganate, free flowing, bulk, hopper trucks, works ....lb.	1.09	-
50-kg. dms., same basis ....lb.	1.20	-
150-kg. dms., same basis ....lb.	1.17	-
Potassium permanganate, USP, 50-lb. kgs., works, c.l., t.l. ....lb.	1.38	-
Potassium persulfate, 225-lb. dms., 24,000 lbs. or more, f.o.b. plant ....cwt.	78.80	-
c/l/t same basis ....cwt.	72.50	-
Potassium pyrophosphate tetrabasic, bgs., c.l., t.l., works, E., frt. equald ....100 lbs.	43.75	47.25
bulk, same basis ....100 lbs.	46.00	49.50
Potassium salicylate, USP, gran., 200-lb. dms., 2,000 lbs. or more, works, frt. alld ....lb.	1.52	-
USP, powd., 300-lb. dms., 2,000 lbs. or more, same basis ....lb.	1.42	-
Potassium silicate, soln., 29.8-30.2 Be., 2.5 ratio, t.c., t.t., works ....100 lbs.	18.90	-
dms., c.l., t.l., works ....100 lbs.	25.90	-
Potassium silicate, 40-40.5 Be., 2.1 ratio, t.c., t.t., works ....100 lbs.	25.05	-
40-40.5 Be., 2.1 ratio, dms., c.l., t.l., works ....100 lbs.	32.05	-
Potassium silicate, electronics grade, 30-30.4 Be., 2.1-2.2 ratio, t.c., t.t., works ....100 lbs.	26.10	-
dms., c.l., t.l., works ....100 lbs.	33.10	-
solid or glass, 2.15 ratio, dms., c.l., t.l., works ....100 lbs.	53.30	-
solid or glass, 2.5 ratio, dms, c.l., t.l., works	45.65	-
"Ratio" indicates percentage by weight of SiO_2 divided by percentage by weight of K_2O.		
Potassium silicofluoride, bgs., c.l., t.l., frt. equald ....lb.	.11½	.15
Potassium-sodium tartrate, NF, gran. or powd., dms ....lb.	.80	1.20
Potassium sorbate, t.l. dms., divd. ....lb.	2.20	3.10
Potassium stannate, dms., frt. alld. ....lb.	N.A.	-
Potassium sulfate, agricultural grade, min. 50% K_2O std., bulk, c.l., f.o.b. works ....ton	150.00	160.00
Potassium sulfate, gran., purif. 400-lb. dm. ....lb.	.86	-

Potassium tetraborate, gran., bgs., c.l. works ....lb.	1.10	-
dms., same basis ....lb.	1.15	-
Potassium tetraborate powder 15c. per ton higher		
Potassium thiocyanate, USP, cryst., 225-lb. dms., 5-dm. lots ....lb.	4.01	-
tech., cryst., dms., t.l ....lb.	.62	-
Potassium titanate, ctns., c.l., works ....lb.	.71¾	-
Potassium-titanium fluoride, tech., dms., t.l., works, frt. equald ....lb.	1.24	1.59
Potassium-zirconium fluoride, tech., dms., t.l., works, frt. equald ....lb.	.78	-
Prednisone USP, dms., 5 kilos or more ....gram	1.03	-
Prednisolone acetate, USP, dms., 5 kilos or more ....gram	1.12	-
Prednisolone, anhyd., USP, dms., 5 kilos or more ....gram	1.12	-
Procaine hydrochloride, USP, antibiotic grade, dms., 2,000-lb. lots, frt. alld ....lb.	4.95	5.75
Procaine hydrochloride, USP, ampule grade, dms., 1,000-lb. lots, frt. alld ....lb.	4.95	5.50
Propionaldehyde, tanks, f.o.b. ....lb.	.35½	-
Propionic acid, syn., pure, tanks, divd. E. ....lb.	.33	.34½
n-Propyl acetate, tanks, divd ....lb.	.53½	-
n-Propyl alcohol, tanks, divd ....lb.	.42	.44
n-Propyl gallate dms., 100 to 2,000-lb. lots, divd ....lb.	11.50	-
n-Propyl-p-hydroxybenzoate, USP, 500 kilos ....kilo	10.80	-
tech., 500 kilos, f.o.b. ....kilo	10.36	-
Propyl paraben (see n-Propyl-p-hydroxybenzoate)		
Propyl thiouracil, dms., 50-kilo lots or more ....kilo.	55.00	-
n-Propylamine, dms., c.l., divd ....lb.	.75	.80
Propylene, polymer grade, f.o.b. Tex. and La. Gulf Coast points ....lb.	.17¼	-
chemical grade same basis ....lb.	.15¾	.18
Propylene glycol, indust., tanks, f.o.b. ....lb.	.40	.41
USP, tanks, f.o.b. E ....lb.	.43	.44
Propylene glycol monomethyl ether, tanks, divd. E. ....lb.	.49	-
Propylene oxide, tanks, f.o.b. works, frt. equald ....lb.	.47½	-
Psyllium seed, USP powd bgs. ....lb.	1.50	1.75
Pumice, dom., fine, 4F-0, bgs., ton lots ....ton	270.00	-
medium, 0½-1½, bgs., ton lots ....ton	300.00	-
coarse, 2-extra coarse, bgs., ton lots ....ton	300.00	-
Pumice, imp., Italian, fines, bgs., ton lots f.o.b. East Coast ....ton	280.00	-
medium, bgs., ton lots, f.o.b. East Coast ....ton	350.00	-
coarse, bgs., ton lots f.o.b. East Coast ....ton	300.00	-
Pyrazolone red (red 38), dms., works ....lb.	5.25	5.35
Pyrethrum flowers, fine grd. 0.9% pyrethrins, ton lots, frt. alld. ....lb.	1.91	-
Pyrethrum, purif., 20% pyrethrins, dms., works ....lb.	37.50	37.75
Pyridine, refd., 2-deg., c.l., works dms. ....kilo	5.90	-
tanks ....kilo	5.70	-
Pyridoxine hydrochloride, USP, 100 kilos or more, divd. ....kilo.	29.00	33.00
Pyrites, Canadian 48-50% S. mines ....long ton	4.50	5.00
Pyrogallic acid (see Pyrogallol)		
Pyrogallol, 100-lb. dms., 1,000-lb., lots, divd ....lb.	13.70	15.25

Q

Quassia chips ....lb.	.57	-
Quinacridone maroon, dms., frt. alld. ....lb.	20.75	24.25
red, dms., frt. alld. ....lb.	17.75	19.00
scarlet, dms., frt. alld. ....lb.	21.75	24.25
violet, dms., frt. alld. ....lb.	17.75	19.00
Quince seed, bgs ....lb.	2.00	2.75
Quinidine sulfate, USP, 1,000-oz. dms., 2,000 oz. or more ....oz.	4.20	4.25
Quinine hydrochloride, NF, 1,000-oz. dms., 2,000 oz. or more ....oz.	2.45	2.50
Quinine sulfate, USP XVIII, 1,000-oz. dms., 2,000 oz. or more ....oz.	2.30	2.50
Quinoline, dms., t.l., frt. equald ....lb.	1.49	-
tanks, same basis ....lb.	1.43	-

R

R salt tech., 304 molecular wt. ....lb.	2.12	-
Racemethionine, USP, 50-250 kilos ....kilo	6.80	-
250-500 kilos ....kilo	6.60	-
500 or more kilos ....kilo	6.50	-
feed grade, 99% min., c.l., t.l. ....lb.	1.07	-
Rapeseed oil, dms ....lb.	.58½	.62½
Rauwolfia serpentina root, powd. bls., dms ....kilo.	22.00	-
Red carmine, No. 40 (see Carmine No. 40)		
Red precipitate. (see Mercuric oxide, red).		
Reserpine, USP, cryst., bots. ....gram	.40	.42½
Resorcinol tech., bgs., t.l., works divd ....kilo.	3.96	-
Resorcinol, USP, cryst., dms. 50 kilos or more, works ....kilo.	9.35	-
powd. dms., same basis ....kilo.	9.90	-
Resorcinol monoacetate, dms., 1,000 lbs. or more ....lb.	1.98	-
Rhodamine red toner, molybdated, PMA, dms., works ....lb.	9.25	-
tungstated, PTMA, dms., f.o.b. works ....lb.	11.80	14.00
Rhodinol, 25-lb. cns ....lb.	105.00	105.10
syn., dms ....lb.	15.25	[illegible]
Rhubarb root, India, whole, bgs ....lb.	.45	.70
powd., bgs ....lb.	.61	-
Riboflavin, feed grade, 25 kilos, divd ....kilo.	34.50	40.00
Riboflavin, USP, 25 kilos, divd ....kilo.	49.00	-
Riboflavin 5-phosphate-sodium, 25-kilo lots ....kilo.	138.00	-

Rice bran oil, refined dms. t.l. ....lb.	1.25	-
Ricinoleic acid (see Castor oil acids, split).		
Rochelle salt (see Potassium-sodium tartrate).		
Roofing pitch (see Coaltar pitch, roofing.)		
Rose oil, nat., NF, Bulgarian, otto. bots ....kilo.	3850.00	3990.00
Turkish, otto., bots ....kilo.	2250.00	3000.00
Rosemary oil, NF, Spanish, dms. ....kilo	9.00	11.00
Tunisian, dms ....kilo	8.75	15.00
Rotenone resin, 30-45%, 100-lb. dms. works ....unit-lb.	.21	.23

S

Saccharin NF, gran., soluble, dms. 1,000-lb. lots, frt. alld ....lb.	2.50	2.75
Saccharin NF, powd., soluble, dms., less than 20,000-lb. lots, frt. alld ....lb.	3.75	-
Safflower oil, non-break, tanks, N.Y. ....lb.	.50	.53
edible dms., N.Y., divd ....lb.	.98	1.02
Sage leaves, Dalmatian, No. 1, bgs. ....lb.	1.95	-
Albanian, bgs ....lb.	1.65	-
Turkish ....lb.	1.25	1.30
Sage oil, Clary, French, bots. ....kilo	90.00	-
Dalmatian, cns ....lb.	9.50	10.00
Spanish, cns ....kilo	12.50	-
Salicylaldehyde, tanks, f.o.b. ....lb.	3.60	-
Salicylamide, NF, gran., powd., dms., 2,000-lb. lots, one ship ....lb.	1.07	1.10
Salicylic acid, tech., dms., c.l., t.l., works ....lb.	1.23	1.41
USP, cryst., dms., 1,000 lbs. or more ....lb.	1.33	1.63
USP, powd., dms., 1,000 lbs. or more ....lb.	1.68	-
Salol (see Phenylsalicylate).		
Salt, evaporated, common, 80-lb. bgs., c.l., t.l., North, works ....80 lbs.	4.02	-
bulk, same basis ....ton	60.00	61.20
chemical grade, same basis ....80 lbs.	4.30	-
Salt, rock, medium, coarse, same basis ....80 lbs.	2.70	-
bulk, same basis ....ton	18.00	25.00
Saltcake, dom., bulk, works, 100% Na_2SO_4 basis, f.o.b. works E ....ton	65.00	98.00
same basis W ....ton	90.00	99.00
Sandalwood oil, E. Indian ....kilo	145.00	-
Indonesia ....kilo	102.00	-
Sarcosine, tech., tanks, works, frt. equald ....lb.	.50	-
Schaeffer's salt, paste, dms., 100% basis, works ....lb.	2.59	-
Scopolamine hydrobromide, USP, 100-oz. lots bots ....oz.	36.00	46.50
Sebacic acid, CP, bgs., c.l., works ....lb.	1.95	-
purif., bgs., c.l., works ....lb.	1.94	-
Seidlitz mixture, dms., 5,000-lb. lots ....lb.	.30½	-
Selenium, powd., 99.99% Se, dms., divd ....lb.	13.00	-
coml., 99.5% Se, same basis ....lb.	10.00	15.00
Senna leaves, Alexandria, whole and half, bls ....lb.	.75	.80
Tinnevelly, No. 1, bls ....lb.	.70	.71
powd., bbls., bxs ....lb.	.90	1.10
Sesame oil, USP, dms., l.c.l. ....lb.	1.00	1.20
Sesame seed, Central American, hulled, bgs ....lb	.50	.51
Sienna pigment, burnt, paper bgs., l.c.l., works ....lb.	.19½	.26½
raw, paper bgs., l.c.l., works ....lb.	.18¼	.23¾
Silica, amorph. dry-grd., bgs., c.l., works 93%, 200 mesh ....ton	31.00	32.50
98%, 200 mesh ....ton	32.00	33.50
93%, 97%, 325 mesh ....ton	34.50	35.50
98.5%, 325 mesh ....ton	37.00	-
99.5%, 325 mesh ....ton	51.50	54.50
Silica, dry-grd., bgs., c.l., works, 99.9%, 400 mesh, micronized ....ton	72.00	75.50
99% under 15 microns, micronized ....ton	79.50	82.50
99% under 10 microns, micronized ....ton	104.00	105.00
Silica, hard-quartz, 99.5% SiO_2, 325 mesh, bgs., c.l., works ....ton	37.00	-
140 mesh, bgs., c.l., works ....ton	34.75	-
Silicon tetrachloride, tech., dms., c.l., works ....lb.	.50	-
tanks, works ....lb.	.36	-
Silver bullion, ingots, cs., Troy ....oz.	5.715	-
Silver cyanide, 80% Ag, 500-oz. lots ....oz.	4.556	-
Silver nitrate, ACS, 58.2 Troy oz. AG/100 avoir. oz. $AgNO_3$ ....oz.	3.415	-
Soapbark, crushed, bls ....lb.	1.00	-
powd., bls ....lb.	1.35	1.85
Soda ash, dense, 58%, 100-lb., paper bgs. c.l., works, f.o.b. ....ton	120.00	-
bulk, c.l., same basis ....ton	83.00	-
light 58%, 100-lb., paper bgs., c.l., same basis ....ton	150.00	-
bulk, c.l., same basis ....ton	123.00	-
Soda, caustic, liq., 50%, sellers tanks, Gulf Coast works, f.o.b., frt. equal., 76% Na_2O ....ton.	175.00	195.00
73%, same basis ....ton.	205.00	225.00
flake, 76%, 400-lb. dms, c.l. works ....ton.	500.00	570.00
solid, 76%, 700-lb. dms, c.l. works		
gran., 75%, 450-lb. dms, c.l. works ....ton.	520.00	570.00
beads, 76%, 400-lb. dms., c.l., works ....ton.	520.00	-
works ....100 lbs.	27.50	28.50
Prices for liq. rayon-type, $15 ton higher. Prices in West 70c. higher for solid, and $20-$30 ton higher for gran. and beads.		
Soda, sal, conc., bgs., c.l. works ....100 lbs.	3.35	3.85
Sodium acetate, anhyd., bgs., c.l., f.o.b. works ....lb.	.54	-
Sodium acetate, USP, 60%, gran. 100-lb. dms., c.l., works ....lb.	.57	-
Sodium alginate, NF, white powd., dom., 300 lbs. or more ....lb.	6.00	6.75
Sodium p-aminosalicylate, dms., 100-lb. lots or more, f.o.b. works ....lb.	4.73	-
Sodium antimonate, bgs., c.l., divd. E. ....lb.	1.49	1.50
Sodium ascorbate, USP, dms., 100 kilos ....kilo.	9.30	10.50
Sodium benzoate, tech., bgs., c.l., t.l., frt. alld ....lb.	.70½	-
Sodium benzoate, USP, 50-lb. bgs., c.l., t.l., frt. alld ....lb.	.83½	-
ton-lots, same basis ....lb.	.86½	-
100-lb. dms., c.l., t.l., same basis ....lb.	.89	-
ton-lots, same basis ....lb.	.92	-

Sodium bicarbonate, USP, powd., reg. grade, bgs., c.l., t.l., works, frt. equald ....100 lbs.	17.05	-
coarse, same basis ....100 lbs.	18.05	-
fine, same basis ....100 lbs.	17.20	-
gran., same basis ....100 lbs.	17.85	-
gran., fine, same basis ....100 lbs.	17.60	-
Sodium bichromate, gran., bgs. c.l., t.l., works, frt. equald ....lb.	.57	-
Sodium bifluoride, 400-lb. dms., c.l., frt. equald ....lb.	.78	-
100-lb. bgs., c.l., same basis ....lb.	.76	-
Sodium bisulfate, bulk, c.l., works ....ton	175.00	-
dms., c.l. ....100 lbs.	13.00	-
Sodium bisulfite, anhyd. bgs., c.l., t.l., works, East ....100 lbs.	28.50	-
works, West ....100 lbs.	32.00	-
Sodium bisulfite, soln., 38%, bulk, 100% basis, works, East ....100 lbs.	20.60	-
soln., 100%, bulk, works, West ....100 lbs.	20.00	-
photographic grade, 43% soln., works ....100 lbs.	21.90	-
Sodium borate NF, gran., bgs., c.l., works ....lb.	.51	-
powd., same basis ....lb.	.52	-
Sodium borohydride, powd., dms., 1000-5000 lbs. works ....lb.	19.68	21.90
Sodium borohydride, stabilized water soln., 12% $NaBH_4$, 100% basis, 3000 gal. tankwagon, works ....lb.	17.45	-
Sodium bromide, 99%, gran., 400-lb. dms., f.o.b. works ....lb.	1.04	-
Sodium carbonate, decahydrate, bgs, c.l., t.l., works ....ton.	264.00	-
Sodium carbonate, cryst. monohydrate (see Soda, ash)		
Sodium carbonate, monohydrated, bgs., c.l., t.l., works ....ton	392.00	-
Sodium carboxymethyl cellulose (see CMC.)		
Sodium chlorate, bulk, t.c., t.t., delivered, N.E. ....ton	315.00	-
delivered, S.E. ....ton	335.00	-
Sodium chlorate, cryst., 450-lb. dms., c.l., works. E ....lb.	.27	-
Sodium chloride, tech. (see Salt.)		
Sodium chloride, USP, gran., bgs. ....lb.	.29	-
Sodium chlorite, tech., dms., c.l., works ....lb.	1.17	1.27
Sodium chromate, anhyd., dms., c.l., t.l., works ....lb.	.67	-
Sodium chromate, tetrahydrate, bgs., c.l., t.l., works ....lb.	.64	-
Sodium citrate, gran., anhyd., 200-lb. dms., c.l., t.l., N.Y. ....lb.	1.95	-
Sodium citrate, USP, gran., dihydrate, 100-lb. bgs., t.l., f.o.b. shipping point ....lb.	.74½	-
Sodium cyanate, dms. 1,000-lb. lots, works ....lb.	.85	-
Sodium cyanide, briquettes or gran., 99% min., 200-lb. dms. min., f.o.b works ....lb.	.68	-
Sodium diacetate, anhyd., dms., c.l., works ....lb	.68	-
Sodium diacetate, FCC, 50-lb. bgs., t.l., divd. E. of Rockies ....lb.	.61	.67
Sodium diacetate, tech., 50-lb. dms., c.l., works ....lb.	.52	-
Sodium erythorbate, powd., gran., t.l. or mixed t.l., f.o.b. shipping point ....lb.	2.60	2.85
Prices W. of Denver 2c. per pound higher.		
Sodium ferrocyanide, bgs, t.l., works ....lb.	.60	-
Sodium fluoborate, tech., gran., dms., t.l., works, frt. equald ....lb.	1.77	-
Sodium fluoride, white, 97%, 400-lb. dms., c.l., works, frt. equald ....lb.	.6345	-
100 bgs., c.l., same basis ....lb.	.60	-
USP powd., 200-lb. dms., t.l., f.o.b. shipping point ....lb.	4.69	-
Sodium formate, bgs., c.l., works ....lb.	.20	-
Sodium gluconate, tech., 50-lb. bgs., 2,500 lbs. or more frt. alld ....lb.	.60	-
Sodium hydride, oil dispersion, 60% NaH, 167-lb. dms., 10 dms., works ....lb.	1.86	-
Sodium hydrosulfide. (see Sodium sulfhydrate.)		
Sodium hydrosulfite, dms., c.l., t.l., f.o.b. shipping point E ....lb.	.64	-
Sodium hydroxide, USP, pellets, 100-lb. dms., c.l., t.l., works, frt. equald ....lb.	.95	.98
Sodium hydroxide, tech. (see Soda, caustic.)		
Sodium hypophosphite, EN grade, 300 lb. dms f.o.b. works ....lb.	1.425	1.50
110 lb. dms ....lb.	1.47	1.52
Sodium hyposulfite (see Sodium thiosulfate).		
Sodium iodide, USP, cryst, 300- to 500-lb. lots. dms. frt. equald ....lb.	14.72	-
Sodium lauryl sulfate, 30%, tanks, f.o.b. works ....lb.	.29	.32
Sodium lignin sulfonate, bgs., c.l., works ....100 lbs.	25.50	-
Sodium metabisulfite (see Sodium bisulfite).		
Sodium metaborate, octahydrate, gran., bgs., c.l., works ....lb.	.38	-
tetrahydrate, gran, bgs, c.l., works ....lb.	.49	-
Sodium, metallic, 12-lb. bricks, dms., c.l. works ....lb.	.93	-
fused, dms. 24,000-lb. lots or more, works ....lb.	.67	-
tanks, works ....lb.	.70	.80
Sodium metaphosphate, tech. bgs., c.l., f.o.b. shipping pt. frt. equald ....100 lbs.	61.50	-
food grade, bgs. c.l. f.o.b. frt. equald. ....100 lbs.	68.25	-
Sodium metasilicate, anhyd., bgs., c.l. works ....100 lbs.	27.25	-
bulk, c.l., works ....100 lbs.	25.30	-
pentahydrate, bgs., c.l., f.o.b. shipping point ....100 lbs.	18.95	-
bulk, c.l. works ....100 lbs.	17.20	-
Sodium molybdate, anhyd., dms. f.o.b. works, 100 lbs and over ....lb.	4.87	-
cryst., dms., t.l., same basis ....lb.	4.12	-
Sodium naphthionate, dms., c.l., t.l., f.o.b. works ....lb.	2.00	-
Sodium Nitrate, USP, bgs., c.l., f.o.b., frt. equald ....100 lbs.	34.50	-
Sodium nitrate, dom., industrial, bgs., c.l., works ....ton	284.00	292.00
bulk, c.l., works ....ton	260.00	-
Imp., coml., 100-lb. bgs., c.l., Atl., or Gulf whse ....ton	205.00	214.00
bulk, c.l., same basis ....ton	182.00	-
Imp., agricultural, bulk, c.l., same basis ....ton	140.00	-
Sodium nitrite, USP, dms., c.l., works, frt. equald ....100 lbs.	37.25	-

Sodium orthosilicate, tech., anhyd., bgs., c.l., works ....100 lbs.	34.50	-
Sodium orthosilicate, tech., hydrated, flake, dms., c.l., works ....100 lbs.	27.45	-
bgs., c.l., works ....100 lbs.	26.25	-
Sodium oxalate, 99%, bgs., t.l., works ....lb.	.45	-
Sodium pentachlorophenate, beads c.l., 30,000-lb min ....lb.	.67	-
bgs ....lb.	.66	-
Sodium pentobarbital (see Pentobarbital-sodium).		
Sodium perborate, tetrahydrate, tech., bgs., c.l., t.l., works ....lb.	.32½	.36½
Sodium persulfate, 225-lb. dms., 24,000 lbs. or more, f.o.b. plant ....lb.	.63½	-
55-lb. bgs. same basis ....lb.	.62	-
Sodium phenobarbital (see Phenobarbital-Sodium).		
Sodium phenosulfonate, powd., dms. ....lb.	.76	-
Sodium phosphate, anhyd., dibasic tech., bgs., c.l., t.l., works, frt. equald ....100 lbs.	54.50	-
food grade, same basis ....100 lbs.	57.50	-
Sodium phosphate, monobasic, tech., same basis ....100 lbs.	55.75	-
food grade, same basis ....100 lbs.	59.75	-
tribasic, tech., same basis ....100 lbs.	52.25	52.75
food grade, same basis ....100 lbs.	63.25	-
chlorinated, same basis ....100 lbs.	31.50	-
cryst., tech., same basis ....100 lbs.	30.50	-
cryst., food grade, same basis ....100 lbs.	35.60	-
USP, dried, powd., bgs., dms., works ....lb.	.19	.20½
Sodium picramate, tech., paste, 200-lb. dms., dry basis, divd ....lb.	5.60	-
Sodium propionate, dms., 2,000 lbs. or more, f.o.b. frt. alld ....lb.	.54	-
Sodium pyrophosphate, acid, tech., bgs., c.l., works, frt. equald ....100 lbs.	58.25	-
food grade, non-leavening, bgs., c.l., works, frt. equald ....100 lbs.	61.25	-
Sodium pyrophosphate, ferric, dms., c.l., t.l., works ....lb.	.3880	-
Sodium pyrophosphate, tetrabasic, anhyd., tech., bgs., c.l., t.l., works, frt. equald ....100 lbs.	44.75	-
bulk, hopper cars, same basis ....100 lbs.	42.50	-
food grade, bgs., c.l., t.l., same basis ....100 lbs.	53.00	-
Sodium salicylate, USP, cryst., 200-lb. dms., 1,000-lb. lots or more, works, frt. equald ....lb.	3.00	-
USP, powd., 200-lb. dms., 1,000-lb. lots or more, same basis ....lb.	3.05	-
Sodium sesquicarbonate, bulk, c.l., t.l., works ....ton.	170.00	-
bgs, c.l., t.l. works ....100 lbs.	198.00	-
Sodium silicate, solid, or glass, 3.22-3.25 ratio, bulk, c.l., t.l., works ....100 lbs.	15.70	-
bgs., c.l., t.l., works ....100 lbs.	27.75	-
1.95-2.00 ratio, bulk, c.l., t.l., works ....100 lbs.	20.30	-
bgs., c.l., t.l., works ....100 lbs.	22.15	-
soln., 37.6° solid, 3.22-3.25 ratio, bulk, c.l., t.l., frt. equald ....100 lb.	6.30	-
"Ratio" indicates percentage by weight of SiO_2 divided by percentage by weight of Na_2O.		
Sodium silicofluoride, bgs., c.l., t.l., works, frt. equald ....100 lbs.	17.95	19.75
Sodium stannate, dms. wks. frt. alld. E. ....lb.	N.A.	-
Sodium sulfanilate, dms, works ....lb.	.22	-
Sodium sulfate, NF XII, powd., dms., 2,000-lb. lots ....lb.	.23½	-
tech., detergent, rayon-grade, c.l., works. Gulf ....ton	90.00	96.00
Sodium sulfate, West, bulk, c.l., works, frt. equald ....ton	90.00	101.00
bulk, c.l. East, same basis ....ton	113.00	114.00
Sodium sulfate, photo grade, 100-lb. bgs., c.l., works ....ton	47.00	53.00
Sodium sulfhydrate, flake, 70-72%, dms., c.l., works, frt. equald ....ton	500.00	-
liq., 44-46%, tanks, works, frt. equald ....ton	500.00	-
Sodium sulfide, flake, dms., c.l., works, E., frt. equald ....ton	470.00	-
bgs., same basis ....ton	410.00	-
Sodium sulfide, fused, dms., c.l., works, E., frt. equald ....ton	240.00	-
Sodium sulfite, anhyd., tech. 95-100% bgs, f.o.b. works ....100 lbs.	23.76	-
Sodium sulfocyanide CP (see Sodium thiocyanate).		
Sodium tetraborate (see Borax).		
Sodium tetrasulfide, liq. 34%, dms., c.l., works., frt. equald ....ton	540.00	-
Sodium thiocyanate, purif., cryst., 250-lb. dms., 5 dms. or more f.o.b. works ....lb.	3.26	-
tech., anhyd. dms., 2,000 lbs. or more, works ....lb.	.97	-
Sodium thiosulfate, tech., photo-grade, anhyd., 100-lb. bgs., c.l., t.l., works, frt. equald ....100 lbs.	45.50	-
cryst. pentahydrate, c.l., t.l., same basis ....100 lbs.	26.50	-
Sodium titanate, dms., c.l., works ....lb.	.14¼	-
Sodium trichloroacetate, 95%, 50-lb. bgs., c.l., frt. alld. E. ....lb.	.28	-
Sodium tripolyphosphate, tech., bgs., c.l., t.l., works, frt. equald ....100 lbs.	39.75	-
bulk, hopper cars, same basis ....100 lbs.	37.50	-
food grade, bgs., c.l., t.l., same basis ....100 lbs.	46.50	-
Sodium tungstate, tech. high moly., dms., 10,800 lbs. or more, frt. alld ....lb.	5.00	5.50
Folin grade dms., 10,800 lbs. or more, same basis ....lb.	8.00	-
Sodium-ammonium phosphate, purif., cryst., dms., works ....lb.	.52	-
Sodium-formaldehyde sulfoxylate, dms., t.l., f.o.b. works ....lb.	.91	-
Sodium-zirconyl sulfate, dms., 1,000-lb. lots or more, works ....lb.	.28	-
tech., dms., any quantity, works ....lb.	.16	-
Solvent naphtha, petroleum, straight aromatic, b.r. 320°-350°F, 58°F m.a.p., tanks:		
New Jersey ....gal.	1.52	-
Houston ....gal.	1.41	-
Illinois ....gal.	1.54	-
Solvent naphtha, petroleum, straight aromatic, b.r. 360°F-410°F, 80°F m.a.p., tanks:		
New Jersey ....gal.	1.30	1.35
Houston ....gal.	1.30	-
Illinois ....gal.	1.30	1.35
Sorbic acid, t.l. dms., divd. ....lb.	2.20	3.10

CHEMICAL PRICES

WEEK ENDING OCT 3, 1986

Sorbitan monostearate, dms., c.l., t.l., 30,000 lb. min., f.o.b. works ....lb.	.78	-
Sorbitan tristearate, c.l., t.l., 30,000 lb. min., f.o.b. works ....lb.	.80	-
Sorbitol, USP, reg. 70% aqueous, dms., c.l., f.o.b. shipping point ....lb.	.35	-
tanks, f.o.b. shipping point ....lb.	.30	-
gran., dms., c.l. t.l., works ....lb.	.70	.74
powd., dms., c.l., t.l., works ....lb.	.68	.72
Soybean meal (See Oils, Fats & Waxes market report.)		
Soybean oil (See Oils, Fats & Waxes market report.)		
Soybean oil acidulated, soapstock, 95% acid, tanks, New York ....lb.	.14	.15
Soybean oil, acid, dbl., dist., dms ....lb.	.48	.59
tanks ....lb.	.43	.44
s.d., dms ....lb.	.47	.58
tanks ....lb.	.38	.43
Spearmint leaves, imp., bls ....lb.	2.50	2.70
Spearmint oil, Far West, native ....lb.	14.00	15.00
Midwest, native ....lb.	10.00	12.00
Far West, Scotch ....lb.	15.00	15.50
Midwest, Scotch ....lb.	14.50	15.25
Spruce oil, dms ....lb.	8.00	-
St. John's bread, edible, bls ....lb.	.29	.30
Stannic chloride, anhyd., dms., works ....lb.	N.A.	-
Stannic oxide, dms., works ....lb.	N.A.	-
Stannous chloride, anhyd., dms wks ....lb.	N.A.	-
Stannous fluoborate, liq., conc., dms., t.l., works, frt. equald ....lb.	2.60	-
Stannous oxide, dms., works ....lb.	N.A.	-
Stannous sulfate, dms., works ....lb.	N.A.	-
Stearic acid, double pressed, bulk ....lb.	.26	.39
single-pressed, bulk ....lb.	.28	.375
triple-pressed, bulk ....lb.	.32	.40
Stramonium leaves, bgs ....lb.	.15	.20
Streptomycin sulfate, USP, bulk, ...kilo.	47.00	-
Strontium carbonate, glass grd., bgs., t.l., works ....lb.	.37¼	-
Strontium nitrate, 50-15 bgs., c.l., works ....100 lbs	51.50	-
Styrene monomer, 99.6% min., t.c., t.t., f.o.b. works ....lb.	22	27
Styrene-acrylonitrile resin, nat., bulk, f.o.b. plant ....lb.	.77	-
cryst., bulk, same basis ....lb.	.77	.81
clear, same basis ....lb.	.77	.81
Styrol acetate, dms ....lb.	2.35	-
Succinic acid, purif., cryst., dms., t.l., frt. alld ....lb.	2.00	2.10
Succinic anhydride, dms., c.l., t.l. f.o.b. work ....lb.	1.71	-
Sucrose, refd., white, bgs., c.l., f.o.b. refy. E. ....100 lbs.	33.10	-
Sucrose acetate, isobutyrate, 90% dms., t.l., divd ....lb.	1.18	-
tanks, divd ....lb.	1.10	-
100%, dms., t.l., divd ....lb.	1.18	-
Sucrose octa-acetate, denaturing grade, 100-lb. dms., f.o.b. works ....kilo	12.50	13.50
Sulfabenzamide, dms., 500 kilos. ....kilo.	39.50	-
Sulfabenzamide-sodium, dms., 500 kilos ....kilo.	25.00	-
Sulfacetamide, USP, dms., 500 kilos ....kilo.	20.00	23.50
Sulfadiazine, USP, powd. dms., 500 kilos ....kilo.	53.00	-
Sulfadiazine-sodium, USP, dms., 500 kilos ....kilo.	40.70	-
Sulfamerazine, USP, microcrystals, dms., 500 kilos ....kilo.	33.50	-
USP, powd., dms., 500 kilos ....kilo.	32.00	-
Sulfamethazine-sodium, USP, powd. dms., 50 kilos ....kilo.	13.00	-
Sulfamethazine, powder, dms., 500 kilos ....kilo.	9.00	10.00
Sulfamic acid, cryst., bgs., c.l., t.l., works ....100 lbs.	38.00	41.00
Sulfamic acid, gran., dms., c.l., t.l., works ....lb.	.36	-
Sulfanilamide, NF, reg. 1,000-lb. dms., frt. equald ....lb.	2.00	-
Sulfanilic acid, tech., bgs., t.l., f.o.b. works ....lb.	.67½	-
Sulfaquinoxaline, veterinary, grade, dms ....lb.	8.00	-
Sulfur, crude, bright, molten, dom., f.o.b. vessels, Gulfports ....long-ton	150.00	-
f.o.b. La. refy ....long-ton	125.50	-
recovered, divd., Houston ....long-ton	125.50	-
ex terminal, Rotterdam ....long ton	135.00	-
f.o.b. tanks, Alberta, Canada, for US delivery ....long-ton	102.00	-
dark, ex-Tampa, Fla. ....long-ton	157.50	-
Sulfur, crude, 99.5% min. purity, coml. flour, 50-lb. bgs., c.l., mines basis ....100 lbs.	13.60	-
lump, same basis ....100 lbs.	13.60	-
Sulfur, refd., 99.5% min. purity, rolls 50-lb. bags, c.l., mines basis ....100 lbs.	17.50	-
flour, light, 50-lb. bgs., same basis ....100 lbs.	20.00	-
Sulfur, refd., sublimed, NF, 99.85% min. purity, 50-lb. bgs., c.l. mines basis ....100 lbs.	28.00	-
Sulfur, rubbermakers, 99.5% min. purity, coml., reg., 50-lb. bgs., c.l., mines basis ....100 lbs.	14.60	-
fine, 96% min. passing through 325 mesh, same basis ....100 lbs.	15.60	-
Sulfur dichloride, dms., c.l., works, frt. equald ....lb.	.24	-
tanks, same basis ....lb.	.17½	-
Sulfur dioxide, liq., bulk, t.c., t.l., f.o.b. works ....ton	290.00	-
Sulfur monochloride, dms., c.l., works, frt. equald ....lb.	.22½	-
tanks, same basis ....lb.	.16½	-

CHEMICAL PRICES

WEEK ENDING OCT 3, 1986

Sulfuric acid, virgin 100% tanks, works,		
East Coast .... ton	71.75	95.90
Gulf Coast .... ton	75.00	86.40
Midwest .... ton	80.25	–
Southeast .... ton	68.15	–
West Coast .... ton	85.00	–
NOTE: For prices on 60 and 66 Be., multiply by .7767 and .9319, respectively. For price of 20% fuming oleum, as is, add $3-$4 to above prices and multiply by 1.045.		
Sulfuric acid, smelter, 100% tanks, works,		
Gulf Coast .... ton	48.00	52.00
New Mexico .... ton	20.00	25.00
Southeast .... ton	63.15	–
93%, tanks, dlvd., Northwest ton	60.00	65.00
Sunflowerseed oil, crude, f.o.b. Minneapolis .... lb.	.14¾	.16½
Superphosphate, triple, 46% or more, a.p.a., run-of-pile, bulk, c.l., Fla .... unit-ton	2.75	3.05
bulk, gran., c.l., Fla .... ton	160.00	165.00

T

Talc, dom., grd. New York bgs., c.l., works .... ton	84.00	–
99.5%, 325 mesh, bgs., c.l., works .... ton	84.00	90.00
Talc, dom., 99.5%, 400 mesh, micronized, bgs., c.l., works.. ton	187.00	238.00
625 mesh, micronized, bgs., c.l., works .... ton	200.00	–
dom., ord., Calif. grd., bgs., c.l., works .... ton	90 00	–
ord., Vermont, off-color grd., bgs., c.l., works .... ton	136.00	–
imp., Canadian, grd., bgs., c.l., works .... ton	70.00	84.00
Tall oil, crude, Southeast, tanks, works, frt. equald. .... ton	135.00	140.00
Tall oil, refd., acid, same basis .... lb.	.31	–
dist., tanks, same basis .... lb.	.19	.23
Tall oil acids, 2% or more rosin, tanks, works, frt. equald. .... lb.	.20½	.23½
less than 2% rosin acid .... lb.	.22	.27
Tallow (see Oils, Fats & Waxes market report.)		
Tallow, fatty acids, tech., non-ref. dms., c.l., dlvd .... lb.	.37	.40
tanks, dlvd .... lb.	.29	.45
hydrogenated, tech., flake, bgs., c.l., dlvd .... lb.	.37	.33
tanks, dlvd .... lb.	.35	.42
Tangerine oil, Fla., dms. f.o.b. .... lb.	10.50	11.00
Italian, dms .... kilo	52.90	–
Tankage, animal feeding, 9-11%, NH_3, New York, bulk .... unit-ton	5.60	–
Tankage, fert. grade (see Nitrogenous process tankage).		
Tannic acid, NF, fluffy, bbls., 1,000-lb. lots .... lb.	8.09	–
tech., powd., dms .... lb.	4.62	–
Tar acid oil, 15-18% t.l., dms., f.o.b works .... gal.	1.40	–
25-28%, t.l., dms., f.o.b. works. gal.	1.59	–
50-53%, t.l., dms., f.o.b. works. gal.	1.87	–
Tartaric acid, NF, bgs. .... lb.	1.20	1.50
Tellurium, metallurgical, f.o.b. works lb.	12.00	–
Terpin hydrate, NF, imp., cryst., powd., 36 kilo drums, f.o.b. ship. pt., frt. equald .... lb.	1.35	–
Terpineol .... lb.	1.10	1.50
Terpinyl acetate, extra, dms .... lb.	2.40	–
prime, dms .... lb.	1.35	2.05
Terpinyl propionate, dms .... lb.	4.50	–
Tetrachloroethylene, tech. (see Perchloroethylene).		
Tetrachloroethylene, USP, dms., c.l., t.l., works .... lb.	.30¼	–
Tetraethyl orthosilicate, bulk, f.o.b. works .... lb.	1.53	1.66
Tetraethylene glycol, tanks, frt. alld. lb.	.67	–
Tetraethylene glycol diacrylate, t.l. dms., f.o.b. works .... lb.	1.50	–
Tetraethylenepentamine, tanks, same basis .... lb.	1.70	1.75
Tetraethylthiuram disulfide, tech., flake, dms., t.l., frt. alld. .... lb.	.68	2.07
Tetrahydrofuran dms., c.l., t.l., f.o.b. works .... lb.	1.02	–
tanks, same basis .... lb.	.98	–
Tetrahydrofurfuryl alcohol tanks, f.o.b. Memphis, Tenn. .... lb.	.90	–
Tetrahydrolinalool, syn., dms .... lb.	7.20	–
Tetrahydrophthalic anhydride dms., c.l., t.l. f.o.b. works .... lb.	.65	–
Tetrapotassium phosphate (see Potassium phosphate, tetrabasic).		
Tetrasodium pyrophosphate (see Sodium pyrophosphate, tetrabasic.)		
Thallium metal, dlvd .... lb.	35.00	–
Thallium sulfate, 99%, bots., dlvd. kilo	140.00	–
Theobromine, bulk f.o.b. works ... lb.	4.00	4.50
Theophylline, USP, anhyd. 50-kilo dms., 10,000-kilo lots .... kilo	12.00	12.95
Thiamine hydrochloride, USP 100-kilo dms., dlvd. .... kilo.	27.00	31.00
Thiamine mononitrate, USP, 100-kilo., dms., dlvd. .... kilo.	27.00	31.00
Thiodiphenol, 98%, dms., f.o.b. works .... lb.	3 35	–
Thioflavin green toners, molybdated, PMA, dms .... lb.	5.40	6.05
tungstated, PTA, dms .... lb.	5.60	5.85
Thioglycolic acid, refd., dms., ton lots 100% acid basis .... lb.	2.07	–
Thioindigoid maroon, dms., frt. alld. lb.	7.50	–
reds, dms., frt. alld. .... lb.	5.88	6.12
Thionyl chloride, high-purity, 99.6%, 24,000-lb. min. t.l. dms. frt. equald .... lb.	.55	–
Thorium nitrate, purif., dms., 100-lb. lots or more, works .... lb.	2.75	–
dl-Threonine, dms 10 kilos wks ... kilo.	128.00	–
Thyme leaves, French, bgs. .... lb.	1.45	–
Spanish, bgs .... lb.	.75	–0
Thyme oil, NF, red, dms .... kilo	20.00	–
NF, white, dms .... kilo	22.00	–
Thymol, NF .... lb.	3.75	6.15
Thymol iodide, dms., 100-lbs. f.o.b. works .... lb.	52.30	56.20
Tin metal (NY composite) .... lb.	N.A.	–
Titanium dioxide, anatase, bgs., 20-ton lots, frt. alld .... lb.	.77	.79
slurry shipments, 50-ton lots, dry basis, frt. alld .... lb.	.78	–
Titanium dioxide, rutile, reg., bgs., 20-ton lots, frt. alld .... lb.	.81	.84
slurry shipments, 50 ton lots, dry basis, frt. alld .... lb.	.84	–
Non-chalking rutile material costs 1c. per pound more.		
Titanium hydride powd. electronics grade, dms .... lb.	26.50	–
Titanium tetrachloride, tech., bulk, c.l., f.o.b. works .... lb.	.30	.35
200-gal cylinders c.l., same basis lb.	.50	–
Titanium sponge, 99.3%, fiber drums, less than 5,000 lbs. f.o.b. wks .... lb.	4.85	–
Tobias acid, 2,000 lbs. or more ... lb.	2.45	–
d-a-Tocopherols, 67%, dms .... kilo	50.08	–
d-a-Tocopheryl acetate, 81% conc., dms .... kilo	57.49	–
d-a-Tocopheryl acid succinate, cryst., dms .... kilo	78.44	–
dl-a-Tocopherol, dms .... kilo.	27.40	–
dl-a-Tocopheryl acetate, USP 50-kilo dm. 1000 kilo min. .... kilo.	16.00	18.50
50% dry powd., 50-kilo dm .... kilo	17.00	–
Tolu balsam, cns. .... lb.	7.60	8.68
Toluene, petroleum, ind. or nitration, tanks		
Atlanta, Ga., dlvd .... gal.	.73	–
Bayonne, N.J., dlvd .... gal.	.73	–
Baytown, Tex., f.o.b .... gal.	.73	–
Chicago, Ill. dlvd .... gal.	.73	–
Clairton, Pa., f.o.b .... gal.	.73	–
Deer Park, Tex., f.o.b .... gal.	.73	–
Ft. Wayne, Ind., dlvd .... gal.	.73	–
Gulf Coast, spot, barges .. gal.	.65	.67
Houston, Tex., dlvd .... gal.	.73	–
New Jersey Metro, dlvd ... gal.	.73	–
Philadelphia, Pa., dlvd .... gal.	.73	–
Providence, R.I., dlvd. .... gal.	.73	–
Toluene di-isocyanate (mixed isomers), 80%, 2,4- and 20% 2,6-isomers, jumbo tankcars, dlvd. .... lb.	1.01	–
p-Toluenesulfonamide, powd., dms., t.l., works .... lb.	3.55	–
m-Toluidine, tech., bulk .... lb.	3.10	–
o-Toluidine, tech., liq., dms. c.l. ... lb.	.72	.75
bulk, same basis .... lb.	.60	.64
p-Toluidine, tech. cast solid, dms., cl., works .... lb.	1.80	1.85
Liq., tanks, same basis .... lb.	1.70	–
flake, same basis .... lb.	1.95	–
Toluidines, mixed, o-m-p, tech., liquid, c.l. f.o.b. works .... lb.	1.03	–
bulk same basis .... lb.	.95	–
Tolyltriazole, dms., 1,000-lb. lots, f.o.b. Cincinnati, Ohio .... lb.	2.90	–
Tonka beans, Angostura, prime, 1,000-lb. lots .... lb.	6.50	–
Toxaphene, dms., c.l., t.l., works .. lb.	.38	–
Tragacanth gum, No. 1, ribbons, cns. lb.	36.00	40.00
flaked powder .... lb.	12.50	15.00
Triacetin tanks, dlvd. E .... lb.	.75	–
Tributyl citrate, t.l., drums, f.o.b., works .... lb.	1.70	–
Tributyl phosphate, tanks, works .. lb.	1.65	1.77
Tributylamine, dms., c.l., dlvd .... lb.	1.39	–
tanks, same basis .... lb.	1.33	–
Trichloroacetic acid, tech., 300-lb. dms., c.l., f.o.b., works .... lb.	.94	–
USP, 100-lb. dms., frt. equald. .. lb.	.99½	–
1,2,4-Trichlorobenzene, pure, tanks, dlvd .... lb.	.61½	–
1,1,1-Trichloroethane, tanks, consumers, dlvd .... lb.	.40½	–
1,1,2-Trichloroethane, tanks, f.o.b. works .... lb.	.42	–
Trichloroethylene, tanks, dlvd. .... lb.	.38½	–
Trichloroisocyanuric acid, dms .... lb.	1.25	–
Trichlorophenoxyacetic acid (see 2,4,5-T).		
Tricholine citrate, 65%, soln., non-ret. dms., 1,500-lb. lots, dlvd ... lb.	1.35	–
Tricresyl phosphate, tanks, f.o.b. works .... lb.	1.60	1.76
Tridecyl alcohol, mixed isomers, tanks, dlvd .... lb.	.57	–
Triethanolamine, 85%, tanks, dlvd. E. lb.	.45	.48
99%, tanks, same basis .... lb.	.45	.48
Triethanolamine lauryl sulfate, tanks, f.o.b. works .... lb.	.27¼	.27½
Triethylamine, dms., c.l., dlvd .... lb.	1.33	–
tanks, same basis .... lb.	1.20	–
Triethyl citrate, t.l., drums, f.o.b., works .... lb.	1.82	–
Triethyl phosphate, tanks, dlvd. ... lb.	1.15	–
Triethylene glycol, tanks, f.o.b. Gulf lb.	.47	–
Triethylene glycol dipelargonate, tanks f.o.b. works .... lb.	.29½	–
40-60% tanks, 100% basis, frt. equald .... lb.	.35	–
Triethylenetetramine tanks, frt. equald. lb.	1.43	1.45
Tri-iso-tolyl trimellitate, f.o.b. works lb.	.51	.55
Tri-isobutylene, tanks, dlvd. .... lb.	.45	–
Tri-isopropanolamine, dms., c.l., frt. alld. E. .... lb.	.57½	–
Trimethylamine, anhyd., tanks, frt. equald., 100% .... lb.	.54½	–
25% soln., tanks, frt. equald., 100% basis .... lb.	.63½	–
40% soln., tanks, frt. equald., 100% basis .... lb.	.56½	.57
Trimethylolpropane bgs c.l. t.l. dlvd. lb.	.73	–
Trimethylolpropane triacrylate, t.l. dms., f.o.b. works .... lb.	1.50	–
Tripentaerythritol, tanks, frt. alld., E. lb.	1.00	–
Triphenyl phosphate, dms., t.l., frt. equald .... lb.	1.64	.78
Tripropylene glycol tanks, frt. alld. E .... lb.	.64	–
Tris-(hydromethyl) nitromethane, solid, t.l. works .... lb.	.605	–
Trisodium phosphate (see Sodium phosphate, tribasic)		
l-Tryptophan, dms, 25-kilo lots ... kilo	62.00	65.00
Tung oil, tanks, imp. New York .... lb.	.32	.34
Tungstic acid 92½%, dms., 1,750-8,000 lbs., works .... lb.	12.65	–
Turmeric, Alleppey 5% .... lb.	.65	–
Turmeric, Alleppey over 6% .... lb.	.70	–
Turpentine, crude sulfate tanks, f.o.b. Southeast works .... gal.	.70	.80

U

Ultramarine blue pigments, 550-2,000 lb.-lots, works .... lb.	1.30	–
violet, same basis .... lb.	2.20	–
Umber pigment, burnt, American, frt. equald .... lb.	.13½	.15½
raw, American, dom., bgs., f.o.l., same basis .... lb.	.13½	.14¾
Undecylenic acid, dms., works .... lb.	2.70	–
Urea, 46% N, ind., bulk, 50-ton c.l., dlvd .... ton	200.00	220.00
46% N, agricultural, bulk, dlvd. Mid-west .... ton	200.00	215.00
46% N, agricultural, bulk, dlvd. West ton	210.00	–
Uva-Ursi leaves, bls. .... lb.	.22	–

V

Valerian root, Belgian, bgs .... lb.	.65	.85
Indian. bgs .... lb.	.45	–
Vanadium oxytrichloride, 3,000 lb. cyls., works .... lb.	5.40	–
Vanadium pentoxide, tech., gran., per lb. of V_2O_5, 550-lb. dms., works. . lb.	4.10	4.94
fused or flake, per lb. V_2O_5, 550-lb. dms., works .... lb.	3.35	3.65
Vandyke brown, bags., t.l., frt. equald. lb.	.27¼	–
Vanilla beans, Madagascar .... lb.	37.00	–
Java, tins .... lb.	27.00	30.00
Vanillin, USP, dms., f.o.b works ... lb.	6.25	–
imp., dms .... lb.	4.75	5.00
Versinol Ag .... lb.	.64	–
Vetiveryl acetate, dms. .... kilo	60.50	–
extra .... lb.	63.00	–
Vetiver oil, Bourbon, dms .... lb.	16.00	17.00
Haitian .... lb.	28.00	–
Java .... kilo	31.00	–
Victoria blue toners, molybdated, PMA dms .... lb.	6.20	6.30
tungstated, PTA, dms .... lb.	10.40	–
Vinyl acetate monomer, tanks, dlvd. lb.	.39	–
Vinyl chloride monomer, polymer grade, tanks, f.o.b. works... lb.	.28	–
Vinyl ether, USP, anesthesia, 75-cc. bots., hospitals .... bots.	1.56	–
2-Vinylpyridine t.l., dms. works. . kilo.	7.81	–
tanks, works .... kilo.	7.61	–
Vinyltoluene, bulk, f.o.b. .... lb.	.67	.73½
Vitamin A, synthetic, dry, pharm., 500,000 A units per gm., 50-kilo. lots . kilo	33.00	–
Vitamin A, liq. in oil, pharm., 1,000,000 A units per gram, 10 kilo lots. . kilo	41.00	–
Vitamin A, feed grade, 650,000 units per gm .... kilo.	18.70	23.85
Vitamin B_1 (see Thiamine hydrochloride).		
Vitamin B_{12} (see Riboflavin and Yeast).		
Vitamin B_{12}, cryst., non-sterile, USP (cyanocobalamin), vials, 50-gram, lots. .... gram	8.00	9.75
Vitamin B_{12} 1% trituration of cryst. B_{12} (cyanocobalamin USP) with dicalcium phosphate, 25-kilo dms. kilo.	10.75	12.75
Vitamin B_{12}, 0.1% trituration of cryst. B_{12} (cyanocobalamin USP) with mannitol, 25-kilo. dms .... kilo.	15.80	–
Vitamin B_{12}, cobalamin concentrate NF with mannitol. 1,000 mcg. per gram, dms, ... per gram activity	19.45	–
Vitamin B_{12}, 1% Vitamin B_{12}, USP, absorbed on resin, 5-kilo dms., 500-gram lots, frt. alld. per gram activity	15.65	–
Vitamin B_{12}, 1% cobalamin concentrate, NF, absorbed on resin, 5-kilo dms., frt. alld. per gram activity..	15.40	–
Vitamin B_{12}, 1% cyanocobalamin in gelatin, 2.5-kilo dms., frt. alld .... per gram activity	15.40	–
Vitamin C (see Ascorbic acid).		
Vitamin D (see Cholecalciferol)		
Vitamin D_2 (see Codliver and Fishliver oils).		
Vitamin E (see a-Tocopherol and Wheat germ oil).		
Vitamin H (see Biotin).		
Violet methyl toner (see Methyl violet toner)		

W

Warfarin 0.5%, dms., ton lots, frt. alld. New York or Chicago .... lb.	.75	–
Wheat germ oil, cold-pressed .... gal.	16.50	17.50
cold-processed .... gal.	14.00	–
White precipitate, USP, powd., 100-lb. dms., f.o.b. works .... lb.	7.892	11.24
Whiting (see Calcium carbonate).		
Wintergreen oil, syn. (see Methyl salicylate).		
Witch hazel bark, bls. .... lb.	1.35	–
leaves, bls .... lb.	1.75	–
400 mesh, bgs., c.l. works ... ton	134.00	–
325 mesh, bgs., c.l. works ... ton	117.00	–
high aspect ratio, bgs., works ton	164.00	–
Wollastonite, t.l., f.o.b., producing plant. general grade .... ton	200.00	–
325 mesh .... ton	140.00	141.00
400 mesh .... ton	160.00	–
1250 mesh .... ton	500.00	–
Wool grease, USP (see Lanolin).		
Wormseed oil (see Chenopodium oil, NF)		
Wormwood oil, cns .... lb.	31.00	36.00

X

Xanthan gum, food 800-lb. dms., f.o.b. works .... lb.	5.65	6.20
ind., grade, same basis .... lb.	4.54	–
Xylene, petroleum, ind. or nitration, tanks		
Alliance, La., f.o.b .... gal.	.80	–
Atlanta, Ga., dlvd .... gal.	.80	–
Bayonne, N J., dlvd .... gal.	.80	–
Bayonne, N J. f.o b .... gal.	.80	–
Baytown, Tex., f.o.b .... gal.	.80	–
Chicago, Ill., dlvd .... gal.	.80	–
Clairton, Pa. .... gal.	.80	–
Ft. Wayne, Ind. dlvd .... gal.	.80	–
Gulf Coast, spot, barges . gal.	.75	.77
Houston, Tex., dlvd .... gal.	.80	–
New Jersey Metro, dlvd ... gal.	.80	–
Xylene, petroleum, ind. or nitration, tanks		
Philadelphia, Pa., dlvd .... gal.	1.36	–
Providence, R.I., dlvd .... gal.	1.42	–
South Bend, Ind., dlvd .... gal.	1.37	–
m-Xylene, high purity, tanks, f.o.b. Texas City, Tex .... lb.	.36	–
o-Xylene, tanks, works .... lb.	.125	.145
p-Xylene, tanks, dlvd .... lb.	.195	–
m-Xylenediamine, dms., t.l., f.o.b. works .... lb.	1.70	–
2,4-Xylidine, tech., liq., c.l., t l. f.o.b. works .... lb.	1.50	–
Xylidines, mixed, o-m-p., dms., c.l., t.l., f.o.b. works .... lb.	1.00	–

Y

Yara yara, 25-lb. cns .... lb.	2.81	–
Yeast, pure brewer's debittered, NF, Saccharomyces, t.l., f.o.b. works . lb.	1.10	–
Yerba, santa leaves, bls .... lb.	2.40	–
extra, bots. .... lb.	26.50	31.75
Ylang-ylang oil, extra grade .... lb.	23.93	–
grade 1 .... lb.	19.09	–
grade 2 .... lb.	15.90	–
grade 3 .... lb.	13.04	–

Z

Zein, bgs., 2,000-lb. lots .... lb.	7 50	9.30
Zinc acetate, NF, dms. .... lb.	1.00	1.78
tech., dihydrate, bgs., t.l., works. lb.	1.60	–
Zinc borate, tech., 43% ZnO, 37% B_2O_3, 50-lb. bgs., 20,000-lb t.l., f.o.b. works .... lb	.55	–
cryst., 37% ZnO, 49% B_2O_3, 250-lb. dms. 20,000 lbs. t l. f.o b. wks. lb.	.89	–
Zinc chloride, USP, gran., dms.... kilo	9.79	–
Zinc chloride, tech., soln. 50%, tanks, f.o.b. Cleveland, Ohio .... 100 lbs.	20.20	–
Concord, N.C. .... 100 lbs.	20.20	–
Freeport, Tex. .... 100 lbs.	20.20	–
Old Bridge, N.J. .... 100 lbs.	20.20	–
65 degree, same basis Cleveland, Ohio .... 100 lbs.	27.90	–
Concord, N.C. .... 100 lbs.	27.90	–
Old Bridge, N.J. .... 100 lbs.	27.90	–
70 degree, same basis Cleveland, Ohio .... 100 lbs.	29.70	–
Concord, NC .... 100 lbs.	29.70	–
Old Bridge, NJ .... 100 lbs.	29.70	–
72 degree, same basis Cleveland, Ohio .... 100 lbs.	33.20	–
Concord, NC .... 100 lbs.	33.20	–
Old Bridge, NJ .... 100 lbs.	33.20	–
Zinc chromate, bgs., dlvd .... lb.	1.12	–
Zinc cyanide, dms., c.l. .... lb.	1.65	2.14
Zinc dust pigment type 1 & 2, dms., c.l., f.o.b. plant .... lb.	.59	.67
Zinc ethylenediamine tetracetic acid, 8.4% Zn., ammonia salt soln., t.c., t. t., f.o.b. works .... lb.	.56	–
9% Zn., ammonia salt soln., t.c., t. t., f.o.b. works .... lb.	.48	–
Zinc fluoborate, liq. conc., dms., t.l., works, frt. equald .... lb.	.66	–
Zinc metal, high grade, dlvd .... lb.	.44	–
Zinc naphthenate, liq. 8% Zn, dms., dlvd .... lb.	.95	–
Zinc nitrate, tech., flake 300-lb. dms. . lb.	.34	.36
Zinc oxide photo conductive, bgs., c.l., frt. alld .... lb.	.47¾	.59½
Zinc oxide, USP 50-lb. bxs., c.l., frt. alld .... lb.	.46½	.59¾
Zinc oxide pigment, American process, lead-free bgs., c.l., frt. alld.. lb.	.40	.49
Zinc oxide pigment, French process regular, bgs., c.l., frt. alld... lb.	.41	.51
Zinc phenolsulfonate, purif., gran., 250-lb. dms., t.l., frt. alld... lb.	1.82	–
Zinc pyridinethione, 48% dispersion, dms., f.o.b. works .... lb.	8.50	8.80
Industrial grade	14.50	–
Zinc resinate precip. 7.2-7.6% Zn, dms., frt. alld .... lb.	.45	–
Zinc silicofluoride, dms., c.l., t.l., works .... lb.	.17	–
Zinc stearate, USP, bulk, t.l .... lb.	.92	–
Zinc sulfate, gran., monohydrate, industrial grade 36% Zn., bgs., c.l., works .... 100 lbs.	26.50	29.00
agricultural grade powd., bulk, same basis .... 100 lbs.	22.50	–
Zinc yellow (see Zinc chromate).		
Zinc-ammonium chloride, bgs., c.l., works .... lb.	.42	–
Zinc undecylenate, dms., works. .. lb.	4.67	4.70
Zinc-formaldehyde sulfoxylate, basic 200-lb. dms., frt. alld .... lb.	1.05	–
Zircon gran. bgs., bulk c.l., works. ton	165.00	177.00
Zircon milled bgs., 200 and 325 mesh, c.l., works .... ton	225.00	–
Zirconium acetate soln., 25% ZrO_2, dms., c.l., 30,000 lbs, min., works. . lb.	.97	–
22% ZrO_2, same basis .... lb.	.78	–
Zirconium hydride, powd., electronic grade, dms., works .... lb.	.31	–
Zirconium oxide, powd., coml., dms., 2,000 lbs. min. .... lb.	4.25	–
electronic, same basis .... lb.	7.25	–
insulating, stabilized, 325°F same basis .... lb.	8.31	–
insulating, unstabilized, 325°F same basis .... lb.	[illegible]	–
dense, stabilized, 30F, same basis . lb.	[illegible]	–
Zirconium oxychloride, liq., ctns. 5-ton lots, works .... lb.	[illegible]	–

CHEMICAL IMPORTS

US imports of chemicals and related materials are reported in this section by CPI material. Listings include consignee where possible, container, net weight, name of vessel (in parenthesis), port of origin and date of shipment's arrival in New York or the Port of Newark.

US chemical imports/exports are tabulated monthly in the market reports.

A-B

3 AMINO 4 METHOXYBENZANILIDE 22 dms (5809 lbs) (Nedlloyd Rosario) Rotterdam, 8/31.
ACETAMINOPHEN Byron Chemical 200 dms (24251 lbs) (Ever Golden) Keelung, 8/26.
ACRYLAMIDE American Cyanamid 3600 bgs (206747 lbs) (Ever Guard) Rotterdam, 8/30.
ACRYLONITRILE BUTADIENE RUBBER Alba Fwdg 486 brl (40040 lbs) (Kurobe Maru) Kobe, 8/26.
486 bls (40040 lbsw) (Kurobe Maru) Tokyo, 8/26.
AGAR AGAR American Shpg 113 pkg (16925 lbs) (Neu Ulm) Valparaiso, 8/27.
Harold Pepper 60 dms (7275 lbs) (Ever Golden) Osaka, 8/26.
ALBANIAN DRIED SAGE Folia Falvia 28 bls (3148 lbs) (Atlantic Concert) Liverpool, 9/1.
ALDEHYDE HEPTYLIC Millmaster Onyx Group 60 dms (25265 lbs) (Ever Summit) Fos, 8/28.
ALUMINUM HYDROXIDE Giulini 80 dms (37919 lbs) (Ever Garden) Antwerp, 8/27.
ALUMINUM OXIDE Degussa 5 bks (217902 lbs) (Zim California) Barcelona, 8/29.
ALUMINUM PASTE Gardner Ind 180 dms (45636 lbs) (Sea Land Developer) Bremerhaven, 8/28.
AMMONIUM BIFLUORIDE Daniel F Young 724 bgs (36998 lbs) (Zim Keelung) Osaka, 8/27.
ANIMAL GLUE UHFC 360 bgs (41887 lbs) (American Ohio) Bremerhaven, 8/30.
ANNATO SEEDS DBA Las Villas 30 bgs (1530 lbs) (Saint Louis) Haina, 9/5.
ANTIMONY TRIOXIDE Chi Mei Metals 1360 bgs (75856 lbs) (Tourcoing) Hong Kong, 8/27.
Roussel Pharmaceutical Produ 600 bgs (33598 lbs) (Arild Maersk) Marseille, 8/28.
ASCROBIC ACID E M Ind 1578 ctn (149202 lbs) (Strathconon) Bremerhaven, 8/28.
63 dms (8194 lbs) (Bazias 1) Constanza, 8/28.
BARIUM CARBONATE 400 bgs (22266 lbs) (Kurobe Maru) Tokyo, 8/26.
BARIUM SULPHATE PRECIPITATED POW E Z Em 3360 bgs (189759 lbs) (Export Freedom) Genoa. 8/28
BEEF LIVER GRANULES VGF Chemical 12 dms (3770 lbs) (Rio Cincel) Buenos Aires, 8/26.
BENZOGUANAMINE James E Fox 881 bgs (44438 lbs) (Ever Guard) Hamburg, 8/30.
BENZOIC ACID 400 bgs (22487 lbs) (Bazias 1) Constanza, 8/28.
BENZYL ALCOHOL CDF Chemie 78 dms (39207 lbs) (Stefan Starzynski) LeHavre, 9/2.
BENZYL ALCOHOL NON HAZARDOUS Marlborough Chemicals 1 con (41711 lbs) (Ever Guard) Felixstowe, 8/30.
BENZYL SALICYLATE Rhone Poulenc 50 dms (24602 lbs) (Nedlloyd Express) Marseille, 8/19.
BETA NAPHTHOL Montedison 20 pkg (44297 lbs) (Zim California) Barcelona, 8/29.
Trans Am Air & Sea Freight 648 bgs (36001 lbs) (Ever Golden) Hong Kong, 8/26.
United Mineral & Chemical 560 bgs (31729 lbs) (Bazias 1) Constanza, 8/28.
BHT Inabata 840 pkg (92693 lbs) (Kurobe Maru) Nagoya, 8/26.
BLACK PEPPER Ludwig Mueller 300 bgs (33466 lbs) (Solimoes) Belem, 8/27.
600 bgs (66402 lbs) (Solimoes) Belem, 8/27.
Ludwig Mueller 840 bgs (135239 lbs) (Ever Golden) Singapore, 8/26.
770 ctn (124873 lbs) (Ever Golden) Singapore, 8/26.
BLANC FIXE Ore & Chemical 800 bgs (45609 lbs) (Sea Land Develope) Rotterdam, 8/28.
BORIC ACID Rhone Poulenc 360 bgs (40000 lbs) (Nedlloyd Rosario) LeHavre, 8/31.
BROMOTRICHLOROMETHANE Ameribrom 2 dms (1631 lbs) (Export Freedom) Haifa, 8/28.
2 dms (1631 lbs) (Zim California) Haifa, 8/29.
BUTYL METHACRYLATE MONOMER 1 tnk (38889 lbs) (Starfield) Felixstowe, 8/29.

C-D

CADMIUM CHLORIDE M G Transport Warehouse 23 pkg (2582 lbs) (American Ohio) Bremerhaven, 8/30.
CADMIUM PIGMENT C H Powell 78 dms (13364 lbs) (Kurobe Maru) Tokyo, 8/26.
Davies Turner 82 dms (9793 lbs) (Sea Land Developer) Rotterdam, 8/28.
CAFFEINE ANHYDROUS USP Van Gend & Loos 80 dms (4938 lbs) (Oriental Patriot) Hong Kong, 8/27.
CALCIUM CHLORIDE 2 HYDRATE Davos Chemical 80 bgs (8907 lbs) (Stefan Starzynski) Bremerhaven, 9/2.
CALCIUM GLUCONATE USP POWDER 375 dms (41057 lbs) (Sea Land Developer) Rotterdam, 8/28.
CALCIUM HYPOCHLORITE 360 dms (40675 lbs) (Ever Going) Tokyo, 8/31.
CALCIUM SILICON Affival 33 plt (39286 lbs) (Ever Guard) Hamburg, 8/30.
SKW Alloys 198 dms (117858 lbs) (Ever Guard) Hamburg, 8/30.
CAMPHOR 400 bgs (22751 lbs) (Stratchcono) Bremerhaven, 8/28.
CARDAMOM SEEDS H P Schmid 88 bgs (4040 lbs) (Skodsborg) Sto Tomas, 8/30.
CARNAUBA WAX Irving R Boody 100 bgs (10368 lbs) (Alison) Fortaleza, 8/14.
CARNAUBA WAX & FLAKES MJBC Scheel 150 bgs (12732 lbs) (Alison) Fortaleza, 8/14.
CARNAUBA WAX FLAKES TYPE 4 Robert S Baldini 800 bgs (44974 lbs) (Alison) Fortaleza, 8/14.
Grade FBAC Temuss Products 44 bgs (4453 lbs) (Alison) Fortaleza, 8/14.
Grade MJBC Temuss Products 44 bgs (4453 lbs) (Alison) Fortaleza, 8/14.
Grade RJBC Temuss Products 44 bgs (4453 lbs) (Alison) Fortaleza, 8/14.
Yellow Flake Irving R Boody 300 bgs (30381 lbs) (Alison) Fortaleza, 8/14.
CASHEW NUT SHELL LIQUID Colloid Chemical 1 bks (869715 lbs) (Rio Cincel) Fortaleza, 8/26.
Palmer Intl 2 bks (881840 lbs) (Rio Cincel) Fortaleza, 8/26.
CASTOR OIL Alnor Oil 800 bgs (40794 lbs) (Bacol Vitoria) Santos, 8/30.
United Catalysts 800 bgs (40794 lbs) (Bacol Vitoria) Santos, 8/30.
CAUSTIC POTASH 1 bks (1870825 lbs) (Stolt Osprey) Rotterdam, 8/29.
CAUSTIC SODA 2 bks (13700127 lbs) (Stolt Osprey) Rotterdam, 8/29.
ICD Group 20 plt (39890 lbs) (Nedlloyd Rosario) Antwerp, 8/31.
CELERY SEED Reckitt Colman 50 bgs (5512 lbs) (Arild Maersk) Leghorn, 8/28.
CELLULOSE TRIACETATE Heemsoth Kerner 750 bgs (41832 lbs) (Nedlloyd Express) Leghorn, 8/19.
Meemsoth Kerner 750 bgs (41832 lbs) (Nedlloyd Express) Leghorn, 8/19.
CHROMIUM OXIDE GREEN Revelli Chemicals 800 bgs (47399 lbs) (Bazias 1) Constanza, 8/28.
CIMETIDINE HARMLESS M G Transport Warehouse 40 brl (2469 lbs) (American Ohio) Bremerhaven, 8/30.
CITRIC ACID ANHYDROUS Atlantic Air Express 38 plt (93043 lbs) (Tadeusz Kosciuszk) Rotterdam, 8/26.
800 bgs (45415 lbs) (Ever Guard) Antwerp, 8/30.
44 plt (81482 lbs) (Ever Guard) Antwerp, 8/30.
36 bbg (81350 lbs) (Ever Garden) Antwerp, 8/27.
CITRONELLA OIL Berje 28 dms (12161 lbs) (Rio Cincel) Buenos Aires, 8/26.
CLOVES Prudent Trdg 150 bgs (16634 lbs) (American Lancer) Santos, 8/28.
CLOVE OIL Bush Boake Allen 30 dms (7407 lbs) (Zim California) Barcelona, 8/29.
COBREUVA OIL Order 1 dms (432 lbs) (Lloyd Mediterrane) Rio D Janeiro, 8/28.
CORIANDER OIL Order 6 dms (2650 lbs) (Stefan Starzynski) LeHavre, 9/2.
Polarome 11 dms (4982 lbs) (Stefan Starzynski) LeHavre, 9/2.
CUMIN SEED Miltzer & Muench 400 bgs (48501 lbs) (Bazias 1) Constanza, 8/28.
DICHLOROMETHANE Rema Tech 40 ctn (2601 lbs) (Tadeusz Kosciuszk) Bremerhaven, 8/26
DICYANDIAMIDE 1600 bgs (89595 lbs) (Britta Thien) Rotterdam, 9/2.
DIETHYL MALONATE 209 ctn (29489 lbs) (Bazias 1) Constanza, 8/28.
DIETHYLENETRIAMINE Berol Chemicals 78 dms (36252 lbs) (Atlantic Concert) Gothenburg, 9/1.
DIGITALIS LANATA Burroughs Wellcome 600 bls (49407 lbs) (American Ohio) Rotterdam, 8/30.
DILL HERBS DRIED Panalpina 300 ctn (10053 lbs) (Britta Thien) Hamburg, 9/2.
DIMETHYL MALONATE Dynamit Nobel 76 brl (36526 lbs) (Ever GUard) Antwerp, 8/30.
DISODIUM 5 INOSINATE Ajinomoto 300 ctn (7937 lbs) (Oriental Patriot) Yokohama, 8/27.
DISODIUM PHOSPHATE ANHYDROUS ICD Group 520 bgs (29431 lbs) (Kalidas) Chioggia, 8/28.
DISTILLED MONOGLYCEROL ESTER Mitrans 20 dms (4718 lbs) (Oriental Patriot) Kobe, 8/27.

E-I

EPOXY RESIN Ciba Geigy 229 ctn (13631 lbs) (Kurobe Maru) Kobe, 8/26.
ETHYLENE VINYL CHLORIDE COPOLYMER Toyo Soda 756 bgs (42752 lbs) (Ever Going) Tokyo, 8/31.
ETHYLHEXANOIC ACID 1 con (39482 lbs) (Ever Guard) Antwerp, 8/30.
1 con (36596 lbs) (Ever Guard) Rotterdam, 8/30.
FENNUGREEK SEEDS Schiff Food Products 400 bgs (44092 lbs) (George C) Izmir, 8/30.
FLUOROCARBON POLYMERS Viking Sea Freight 650 pkg (38895 lbs) (Kurobe Maru) Kobe, 8/26.
FRENCH TARRAGO LEAVES Schiff Food Products 150 bgs (3340 lbs) (Nedlloyd Express) Marseille, 8/19.
William E Martin 100 bgs (2227 lbs) (Nedlloyd Express) Marseille, 8/19.
FUMARIC ACID Kaystone Chemical 815 bgs (82113 lbs) (Bacol Vitoria) Santos, 8/30.
GELATIN Peter Cooper 108 dms (24888 lbs) (Arild Maersk) Marseille, 8/28.
Intergel 500 bgs (22377 lbs) (Alison) Santos, 8/14.
Mitta 176 dms (41517 lbs) (Zim Keelung) Osaka, 8/27.
GLUE POWDER H B Fuller 33 pkg (48578 lbs) Britta Thien) Bremerhaven, 9/2.
GLYCINE D V Arguimbau 300 dms (35715 lbs) (Ever Garden) Hamburg, 8/27.
GREEN CARDAMOM Schiff Food Products 20 bgs (2227 lbs) (Skodsborg) Sto Tomas, 8/30.
GUAIACOL Rhone Poulenc 72 dms (34476 lbs) (Arild Maersk) Marseille, 8/28.
GUM ARABIC Steengrafe 420 sks (76742 lbs) (Takoradi) Abidjan, 8/29.
HEXYL BORMIDE Ameribrom 24 dms (12696 lbs) (Tadeusz Kosciuszk) Rotterdam, 8/26.
HEXYLENE GLYCOL ICO Ind 78 dms (34736 lbs) (Alison) Santos, 8/14.
HIDE GLUE Nitta 1600 bgs (101589 lbs) (Zim Keelung) Osaka, 8/27.
Transatlantic By Products 400 bgs (39683 lbs) (American Lancer) Rio Grd Do S, 8/28.
HYDRAZINE 80 dms (37484 lbs) (Ever Summit) Fos, 8/28.
HYDROFLUORIC ACID 204 dms (109962 lbs) (Zim Keelung) Osaka, 8/27.
HYDROQUINONE Rhone Poulenc 720 bgs (41072 lbs) (Arild Maersk) Marseille, 8/28.
HYDROXYLAMINE SULPHATE Virginia Chemicals 720 bgs (40992 lbs) (Stefan Starzynski) Rotterdam, 9/2.
IRON OXIDE 137 dms (39747 lbs) (Strathconon) Bremerhaven, 8/28.
Orgo Thermit 34 dms (38752 lbs) (Stefan Starzynski) Rotterdam, 9/2.
IRON OXIDE Orgo Thermit 29 mix (33256 lbs) (Stefan Starzynski) Rotterdam, 9/2.
ISOBORNYL CYCLOHEXANOL Rhone Poulenc 15 dms (7183 lbs) (Nedlloyd Express) Marseille, 8/19.
ISONONANOIC ACID 2 tnk (77779 lbs) (Ever Garden) Antwerp, 8/27.
ISOPHORONE DIAMINE Nuodex 80 dms (35538 lbs) (Tadeusz Kosciuszk) Rotterdam, 8/26.
150 dms (66634 lbs) (Stefan Starzynski) Rotterdam, 9/2.
ISOVALERIC ACID 209 dms (103305 lbs) (Nedlloyd Rosario) Rotterdam, 8/31.

J-M

JAPANESE GINSENG Kwong Ming Intl Trdg 3 ctn (166 lbs) (Oriental Patriot) Hong Kong, 8/27.
KORINTJI A CASSIA Louis Furth 200 bgs (33069 lbs) (Oriental Patriot) Singapore, 8/27.
A Kazemi 200 bgs (22487 lbs) (Lexa Maersk) Keelung, 8/29.
L CARVONE Maryland Shipbuilding Drydoc 30 dms (13226 lbs) (American Lancer) Santos, 8/28.
LACTIC CASEIN Milk Products 2400 bgs (134392 lbs) (Act 4) Wellington, 9/2.
LAMPONG BLACK PEPPER A Kazemi 210 bgs (34118 lbs) (Tourcoing) Singapore, 8/27.
DMT 210 bgs (34118 lbs) (Tourcoing) Singapore, 8/27.
LANOLIN OIL 80 dms (38096 lbs) (Zim Keelung) Osaka, 8/27.
LAURIC ACID Robeco Chemicals 720 bgs (40792 lbs) (Ever Guard) Rotterdam, 8/30.
LAVANDIN OIL 54 dms (26455 lbs) (Nedlloyd Express) Marseille, 8/19.
LEMON GRASS OIL Fritzsche Dodge & Olcott 10 dms (4427 lbs) (San Pedro) Haina, 8/29.
LEMON OIL Fritzsche Dodge & Olcott 50 dms (22156 lbs) (Rio Cincel) Buenos Aires, 8/26.
26 dms (11812 lbs) (Zim California) Haifa, 8/29.
George Uhe 10 dms (4101 lbs) (American Lancer) Santos, 8/28.
Order 20 dms (8922 lbs) (Rio Cincel) Buenos Aires, 8/26.
LIMONENE Polarome Mfg 125 dms (51257 lbs) (American Lancer) Santos, 8/28.
LINDANE MICRONIZED Rhone Poulenc 600 dms (71561 lbs) (Ever SUmmit) Fos, 8/28.
LINEAR ALKYL BENZENE 1 bks (1782787 lbs) (Stolt Osprey) Rotterdam, 8/29.
LITHOPONE Ore & Chemical 20 plt (39700 lbs) (Ever Guard) Antwerp, 8/30.
LIVER EXTRACT Twin Laboratories 25 dms (5099 lbs) (American Lancer) Buenos Aires, 8/26.
LIVER POWDER VGF Chemical 80 dms (25229 lbs) (Rio Cincel) Buenos Aires, 8/26.
80 dms (25446 lbs) (Amelcan Lancer) Buenos Aires, 8/26.
MAGNESIUM CHLORIDE FLAKES 80 pkg (126833 lbs) (Ever Garden) Hamburg, 8/27.
Potash Import & Chemical 40 pkg (84555 lbs) ()Ever Guard) Hamburg, 8/30
MAGNESIUM HYDROXIDE Sumitomo of America 100 bgs (2425 lbs) (Lexa Maersk) Kobe, 8/29.
MALEIC ANHYDRIDE Huels 720 bgs (40961 lbs) (Stefan Starzynski) Rotterdam, 9/2.
MANGANESE CARBONATE Meiko Warehousing 500 bgs (0 lbs) (Kurobe Maru) Kobe, 8/26.
MANNITOL Davos Chemical 360 dms (61112 lbs) (Lloyd Mediterranea) Rio D Janeiro, 8/28.
MANNITOL P HYDROXYBENZOIC ACID Dastech Intl 400 pkg (31923 lbs) (Ever Going) Kaohsiung, 8/31.
MENTHOL CRYSTALS 40 dms (4,949 lbs) (Ever Golden) Keelung, 8/26.
50 dms (5,496 lbs) (Amerlan Lancer) Santos, 8/28.
METHYL BENZYL ALCOHOL Nuodex 10 dms (4,806 lbs) (Stefan Starzynski) Rotterdam, 9/2.
METHYL SALICYLATE Disposal Felton 152 dms (67,796 lbs) (Bazias 1) Constanza, 8/28.
METHYLENE CHLORIDE 1 bks (1,109,346 lbs) (Stolt Osprey) Rotterdam, 8/29.
MINERAL SAMPLE Jim Wennen 3 dms (2,116 lbs) (Neu Ulm) Valparaiso, 8/27.
MINERAL WAX Strohmeyer & Arpe 441 bgs (44,670 lbs) (Ever Garden) Hamburg, 8/27.
MONO PENTAERYTHRITOL Recochem 18 bbg (35,935 lbs) (Neu Ulm) Valparaiso, 8/27.
MONOSODIUM GLUTAMATE Ajinomoto 2,880 bgs (152,064 lbs) (Bacol Vitoria) Santos, 8/30.
1,800 dms (194,996 lbs) (Bacol Vitoria) Santos, 8/30.
1,750 bgs (189,981 lbs) (Ever Garden) Le Havre, 8/27.
MUNTOK WHITE PEPPER Dmt 180 bgs (33,863 lbs) (Tourcoing) Singapore, 8/27.
Gel Spice 300 bgs (56,438 lbs) (Tourcoing) Singapore, 8/27.

N-O

N BUTYL METHACRYLATE Surface Air Intl 1 tnk (38,845 lbs) (Ever Garden) Felixstowe, 8/27.
1 tnk (40,432 lbs) (Nedlloyd Rosario) Rotterdam, 8/31.
NAPHTHENIC ACID Trans World Shpg 1 tnk (45,900 lbs) (Starfield) Antwerp, 8/29.
NAPHTHOL Silvey Shpg 400 bgs (33,289 lbs) (Ever Golden) Hong Kong, 8/26.
NICKEL SULFATE REFINED Afrimet Indussa 840 bgs (42,000 lbs) (Ever Garden) Antwerp, 8/27.
840 bgs (43,3242 lbs) (Ever Guard) Antwerp, 8/30.
NITROCELLULOSE Fayette Chemical 243 dms (79,955 lbs) (Sea Land Adventur) Algeciras, 8/27.
Fayette Chemical 364 dms (118,123 lbs) (Zim California) Barcelona, 8/29.
OCTYL BROMIDE HARMLESS Ameribrom 14 dms (6,975 lbs) (Tadeusz Kosciuszk) Rotterdam, 8/26.
ORANGE OIL George Uhe 80 dms (35,274 lbs) (American Lancer) Santos, 8/28.
200 dms (82,893 lbs) (Alison) Santos, 8/14.
250 dms (104,166 lbs) (American Lancer) Santos, 8/28.
ORANGE OIL VALENCIA Polarome Mfg 39 pkg (17,477 lbs) (Zim California) Haifa, 8/29.
OREGANO EL Scott 1,100 bgs (22,046 lbs) (Export Freedom) Piraeus, 8/28.
Quality Spice 1,102 bgs (22,089 lbs) (George C) Izmir, 8/30.
ORGANOPHOSPHORUS PESTICIDES Trans Chemic Ind 1 tnk (42,241 lbs) (Sea Land Develope) Bremerhaven, 8/28.
ORTHO XYLENE 1 bks (3,906,900 lbs) (Stolt Osprey) Rotterdeam, 8/29.
OXALIC ACID TR America Chemicals 715 bgs (39,722 lbs) (Alison) Rio D Janeir, 8/14.
Van Waters & Rogers 715 bgs (39,722 lbs) (Alison) Rio D Janeir, 8/14.
OXYTETRACYCLINE BASE BP80 MDSI 280 dms (15,438 lbs) (Ever Going) Hong Kong, 8/31.
OXYTETRACYCLINE HYDROCHLORIDE MI 1 dms (82 lbs) (American Ohio) Felixstowe, 8/30.
13 dms (1,250 lbs) (American Ohio) Felixstowe, 8/30.
21 dms (2,207 lbs) (American Ohio) Felixstowe, 8/30,

P-S

P CHLORO O NITROANILINE 18 bsk (5,862 lbs) (Nedlloyd Rosario) Rotterdam, 8/31.
P METHYLBENZOL CHLORIO P MBC Kay Fries 76 brl (37,615 lbs) (Stefan Starzynski) Bremerhaven, 9/2.
PALMITIC ACID Artek 900 bgs (49,842 lbs) (Lexa Maersk) Hong Kong, 8/29.
PARA NITRO ANILINE Orlex Chemicals 125 dms (12,401 lbs) (Ever Going) Hong Kong, 8/31.
PARACETAMOL 4 dms (300 lbs) (Bazias 1) Constanza, 8/28.
720 dms (46,032 lbs) (Lexa Maersk) Hong Kong, 8/29.
PEARL BONE GLUE Olympic Adhesive 680 bgs (76,308 lbs) (Kurobe Maru) Kobe, 8/26.
PENTAERYTHRITOL Oxiquim 1,400 bgs (79,862 lbs) (Neu Ulm) Valparaiso, 8/27.
PERITONEAL DIALYSIS SOLUTION Delmed 7,776 cs (240,006 lbs) (American Ohio) Rotterdam, 8/30.
PETITGRAIN OIL Polarome Mfg (30 dms (13,170 lbs) (Asuncion) Asuncion, 8/27.
PETROLEUM WAX Ind Raw Materials 687 pkg (30,247 lbs) (Oriental Patriot) Kobe, 8/27.
686 bgs (30,549 lbs) (Oriental Patriot) Yokohama, 8/27.
PHENOXY ACETIC ACID Bristol Myers 792 bgs (20,838 lbs) (Tadeusz Kosciuszk) Bremerhaven, 8/26.
792 bgs (45,939 lbs) (Stefan Starzynski) Rotterdeam, 9/2.
PHOSPHORIC ACID 54 dms (43,805 lbs) (Zim California) Haifa, 8/29.
POLYBUTADIENE RUBBER 64 cs (159,437 lbs) (Oriental Patriot) Kaohsiung, 8/27.
POLYCARBONATE Deer Polymer 3 plt (6,614 lbs) (Bacol Vitoria) Santos, 8/30.
POLYESTER RESIN 60 bbg (80,669 lbs) (American Lancer) Santos, 8/28.
POLYETHYLENE RESIN 2 cs (3,417 lbs) (Lexa Maersk) Kobe, 8/29.
POLYPROPYLENE RESIN NF905A Sumitomo of America 2,160 bgs (126,720 lbs) (Kurobe Maru) Kobe, 8/26.
POLYVINYL ALCOHOL Marubeni America 800 bgs (36,050 lbs) (Kurobe Maru) Kobe, 8/26.
Perry Chemical 770 bgs (38,847 lbs) (Ever Going) Keelung, 8/31.
POLYVINYL BUTYRAL INTERLAYER Schenkers Intl Fwdrs 112 rll (42,222 lbs) (Lexa Maersk) Kobe, 8/29.
POLYVINYL CHLORIDE Tarkett 759 bgs (43,431 lbs) (Ever Guard) Hamburg, 8/30.
Tarkett 759 bgs (43,431 lbs) (Ever Garden) Hamburg, 8/27.
Tarkett 759 bgs (43,431 lbs) (Ever Guard) Hamburg, 8/30.
POPPY SEEDS Great Lakes Intl Trdg 660 bgs (36,376 lbs) (George C) Izmir, 8/30.
Schiff Food Products 660 bgs (36,376 lbs) (George C) Izmir, 8/30.
POTASSIUM BICARBONATE Dynamit Nobel 132 dms (41,345 lbs) (Tadeusz Kosciuszk) Bremerhaven, 8/26.
Kay Fries 266 mix (37,901 lbs) (Ever Guard) Antwerp, 8/30.
POTASSIUM FLUORIDE Laporte 360 bgs (22,024 lbs) (Atlantic Concert) Liverpool, 9/1.
POTASSIUM HYDROXIDE Charles A Redden 343 dms (40,001 lbs) (Sea land Develope) Bremerhaven, 8/28.
POTASSIUM METABISULFITE Rhone Poulenc 350 bgs (39,954 lbs) (Nedlloyd Rosario) Antwerp, 8/31
PROPYL BROMIDE Ameribrom 35 dms (22,377 lbs) (Tadeusz Kosciuszk) Rotterdam, 8/26
PROPYLENE DICHLORIDE DICHLOROPRO Loschaco 1 tnk (45,106 lbs) (Ever Garden) Antwerp. 8/27
SAGE OIL Francesco Pansi 2 dms (891 lbs) (Starfield) Bremen, 8/29.
SALICYLIC ACID USP Rhone Poulenc 160 dms (43,880 lbs) (Nedlloyd Express) Marseille, 8/19.
SARAWAK BLACK PEPPER Gel Spice 210 bgs (34,118 lbs) (Tourcoing) Singapore, 8/27.
SEEDLAC Mantrose Haeuser 1,750 bgs (291,662 lbs) (Ever Golden) Kaohsiung, 8/26.
500 bgs (84,249 lbs) (Ever Golden) Kaohsiung, 8/26.
SESAME OIL Dosanko Foods 4 ctn (159 lbs) (Lexa Maersk) Tokyo, 8/29.
House of Lawrence 1,450 ctn (42,439 lbs) (Zim Keelung) Osaka, 8/27.
Tienley 900 ctn (32,132 lbs) (Ever Golden) Osaka, 8/26.
SESAME SEED GSF Intl 420 bgs (42,420 lbs) (San Pedro) Haina, 8/29.
Louis Furth 880 bgs (44,616 lbs) (San Pedro) Haina, 8/29.
Pacific Agro Ind 3,360 bgs (336,844 lbs) (San Pedro) Haina, 8/29.
Transit Trdg 960 bgs (48,482 lbs) (San Pedro) Haina, 8/29.
SILICON OIL Inter Maritime Fwdg 12 dms (5,649 lbs) (Lexa Maersk) Tokyo, 8/29.
SODIUM BICARBONATE Ilusa Products 4,746 bgs (402,247 lbs) (Ever Guard) Antwerp, 8/30.
SODIUM CHLORIDE Thorson Chemical 400 dms (48,413 lbs) (Nedlloyd Rosario) Antwerp, 8/31.
SODIUM DEHYDROACETATE Total Port Clearance 20 dms (2,368 lbs) (Ever Going) Osaka, 8/31.
SODIUM DICHLORO S TRIAZINETRIONE Olin Chemicals 118 dms (34,079 lbs) (Starfield) Felixstowe, 8/29.
SODIUM GLUCONATE Akzo AM 700 bgs (35,462 lbs) (Ever Guard) Rotterdam, 8/30.
SODIUM LAURYL SULFATE Continental Chemical 875 ctn (39,546 lbs) (Ever Going) Keelung, 8/31.
SODIUM METABISULPHITE Browning Chemical 360 bgs (39,352 lbs) (Stefan Starzynski) Bremerhaven, 9/2.
SODIUM NAPHTHALENE SULFONATE 1 bks (1,607,932 lbs) (Stolt Osprey) Rotterdam, 8/29.
SODIUM TRIPOLYPHOSPHATE Berger 2,280 bgs (115,711 lbs) (Ever Going) Tokyo, 8/31.
Brenntag Interchem 432 bgs (44,471 lbs) (Ever Summit) Leghorn, 8/28.
Browning Chemical 400 bgs (41,711 lbs) (Britta Thien) Hamburg, 9/2.
SOUR ORANGE OIL Fritzsche Dodge & Olcott 5 tgnk (2,172 lbs) (San Pedro) Haina, 8/29.
SUCCINIC ANHYDRIDE NON BEZOIC Distillation Products Ind 144 dms (42,222 lbs) (Stefan Starzynski) Bremerhaven, 9/2.
SULFANILIMIDE BPC 68 American Shpg 400 ctn (34,392 lbs) (Bazias 1) Constanza, 8/28.
SULFURYL CHLORIDE Order 1 tnk (42,328 lbs) (Starfield) Rotterdam, 8/29.
SULPHURIC CHLORIDE IOT Consultants 1 tnk (41,667 lbs) (Britta Thien) Rotterdam, 9/2.

T-Z

TALC Sul American Imports & Expor 200 bxs (2,646 lbs) (Bacol Vitoria) Santos, 8/30.
TARTARIC ACID Tartaric Chemicals 800 bgs (44,974 lbs) (Export Freedom) Genoa, 8/28.
TERT BUTYL ALCOHOL Huels 1 tnk (36,200 lbs) (Tadeusz Kosciuszk) Bremerhaven, 8/26.
TETRA N BUTYL TITANATE MONOMER B Dynamit Nobel 1 con (38,836 lbs) (Tadeusz Kosciuszk) Bremerhaven, 8/26.
TETRACYCLINE HCL Universal Transcontinental 201 dms (24,372 lbs) (American Ohio) Rotterdam, 8/30.

Continued on Page 56

UPE UNIVERSAL PROCESS EQUIPMENT, INC.

WE WANT TO BUY YOUR SURPLUS USED EQUIPMENT/PROCESSES/PLANTS

OVER 15,000 PIECES OF PROCESS EQUIPMENT IN STOCK...CALL TODAY!

LATEST ADDITIONS

JOY Q1602-6 PROCESSOR 304SS, 4 SCREWS
JOY D2416-2.5 PROCESSOR 304SS, 2 SCREWS

6M ROSENMUND 316 SS FILTER
900 GAL. READCO SS SIGMA MIXER
6000 GAL. PFAUDLER REACTOR 100/90 RE-GLASSED
SHARPLES SS MDL. P-3400 (4)
4,200 GAL. HAST C REACTOR 125 FV/175 PSI
1000 SQ. FT. HAST C HT.EXCHANGER 150/75FV UNUSED
(2) NIAGARA 36H100 FILTERS, SS, 190 SQ. FT.
(5) 200 CU. FT. SS rot. ROY VAC DRYER SYSTEMS
(1) 4000 GAL. G/L REACTOR 100FV/150FV JKT.
(1) 6000 GAL. SS REACTOR 50/175 PSI, ½ COIL jkt.
(2) 1200 TONS CARRIER CHILLER SYSTEM
(2) 6'x 61' REINENBERG 304SS ROTARY DRYERS COMPLETE & (3) 5'x25'
NASH VACUUM PUMP MDL. CL 3001 AND 9001
(2) 30 HP & (2) 75 HP SAND MILLS 316 SS
12"x 30"& 24"x 38" PIRD SS S/B CENTRIFUGE

DUST COLLECTORS

SS & CS, PULSE JET AND SHAKER TYPE
400-112,000 SQ.FT.

CORN SYRUP/STARCH PLANT

200,000 lbs/HR @ 300 psi package. boiler
150,000 lbs/HR @ 700 psi package boiler
50,000 lbs/HR @ 250 psi package boiler
6'x50' 304 SS rot. hot air dryer
5'x30' CS rotary hot air dryer
4'x31' L, 72 tube Andreson SS rot. st. dryer
24,000 sq. ft. triple effect evap. Titan tubes
600 sq. ft. U.S. Autojet PR/LF filter collcoto Ind (3)
500 sq. ft. Hercules 316 ELC pr/lf filter (4)
12'x15' Eimco belt CS rot. rac. filter (2)
7'6"x16' Eimco 316 SS precoat filter (2)
8'X10' Eimco 316 SS precoat filter (2)
500 sq. ft.Amer. Ht. Reclaiming 316 SS plate exch.
205 sq. ft. APV 316 SS plate ht. exch.
Ducon SS wet scrubber 11500 cfm
20,000 gal 316L SS mix tank 13'x20'
9,000 gal SS mix tank 13'x8'
7,000 gal 316 SS cone botm. tank 10'8"x9'6"
6,500 gal 316 SS cone botm. mix tank 12'7'8"
5500 gal 316 SS mix tank 12'x6' 5HP (11)
3000 gal SS mix tank 9'x6'6" (3)
3000 gal Blaw Knox 316 SS vac. tank, 6'6"x 12' 15 psi/FV

PLUS MANY MORE ITEMS CALL FOR DETAILS
BUY FROM THE SITE AND SAVE

FILTERS

12'X15' "EIMCOBELT" ROTARY VAC. FILTER SYSTEMS (2)
8'X20' EIMCO, 316SS, HORIZ. VAC. BELT EXTRACTOR
8'X14' EIMCO, 316LSS, PRECOAT ROTARY VAC. FILTER
8'X12' AMETEK, 316SS, ROTARY VAC. FILTER, 300 SQ.FT.
5'X8'6 AMETEK, 316SS, ROTARY VAC. FILTER, 137 SQ.FT.
5'X21' EIMCO POLYPRO EXTRACTOR SETTLERS (3)
4'X20' ST.LINE HORIZ. VAC. BELT FILTER SYSTEM
12"x 13' EIMCO HORIZ. BELT EXTRACTOR
48" SHRIVER ALP POLYPRO CGR FILTER PRESS, 57 CHAMBERS
40" POLYPRO REC. P/F AUTO FILTER PRESS 22 CHAMBERS...1001
42" BURCO QUADRAPRESS MDL.QPF-42/20-55, POLYPRO 30 CU. FT.

8,500 GAL. INCONEL REACTOR, 60 PSI, AGIT.
2,000 GAL. 316SS REACTOR, 1000/100 psi
1,300 GAL. 316SS REACTOR, 150 FV/125 PSI

• TWO LARGE LIQUIDATIONS •

48"x24" TOLHURST SS "BATCHMATIC" CENTRIFUGE (6) COMPLETE ... LATE MODEL.
18" DIA. SS BAKER PERKINS TERMEER PUSHER CENTRIFUGE:
60"x40' JEFFREY SS CONTINUOUS FLUID BED DRYER (2)
60"x20' JEFFREY SS FLUID BED DRYER
6'6x40' FULLER CS ROTARY DRYER, 50 HP
6'6x32' CS COUNTER-CURRENT ROTARY DRYER
ST REGIS 3-STATION BAGGER MDL. 10-VC-3
54" DIA. DUCON 304SS SCRUBBER TYPE L

3-95 CU. FT. DAY SANITARY SS RIBBON BLENDERS, 15 HP
1-40 CU. FT. DAY SANITARY SS RIBBON BLENDER
1-8'x12'CS, K-S PRECOAT ROTARY VACUUM FILTER
1-1'x3' K-S PRECOAT ROTARY VACUUM FILTER ... COMPLETE WITH ALL ACCESSORIES
1-7' DIA. BOWEN SPRAY DRYER ... COMPLETE WITH ALL ACCESSORIES

CENTRIFUGES

BASKET
40"x30" Sharples 316 mdl. T1000 (3)
48"x30" Tolhurst Hast. C Automatic (3)
40"X24", 316SS, Automatic, W/plow

PUSHER TYPE
Bird-Escher Wyss, 316SS, Mdl. P500, 20", UNUSED
DeLaval, 25", 2-Stages, 316SS

DISC/BOWL
DeLaval, Mdl. BRPX-300, SS, vert., & Mdl. BA-00,SS
Westphalia 304 SS Mdl. SAMN-5036
Delaval, BPRX-213, 316 SS (2)

SOLID BOWLS
Sharples, Mdl. P1000, P3000, P5000, P5400, (2), SS
Bird, 40"X60", 36"X72", 32"X50", 24"X38", 18"X42", 18'x28" SS
Podbielniak Mdl. 6000 comp w/controls

VACUUM DRYERS

325 cu .ft. Abbe, 304 SS dbl. cone
200 cu .ft. 316SS, 6'6"x11'6", rotary
164 cu. ft. Devine 304 SS dbl. cone
164 cu .ft. Paterson "Conaform," 316SS Dbl. cone
150 cu. ft. SS 304 SS Twin Shell
150 cu .ft. SS, & 150 cu.ft. Nickel clad
125 cu .ft. SS & CS, 4'x14', 105/90/150 psi
125 & 83 cu. ft. Buflovak SS Rotary
60 cu .ft. Paterson Kelly, SS, dbl. cone
40, & 15 cu.ft. Stokes, SS rotary

WE RENT/LEASE & SELL CHILLERS

GLASS • GLASS • GLASS REACTORS

5,000 GAL. DEDIETRICH 100FV/90 REGLASSED
4,000 GAL. DEDIETRICH 100/90 PSI
3,000 GAL. DEDIETRICH, 100/90, PHILA. DRIVE
3,000 GAL. RA SERIES, 100/90 TW, REGLASSED(2)
2,000 GAL. RA SERIES, 100/90 TW, REGLASSED
1,000 GAL. RA SERIES, 100/90 TW, REGLASSED
1,000 GAL. E SERIES 25/90 (4)
750 GAL. 25/90 TW, (2)
500 GAL. RA SERIES, 100/90, TW
400 GAL. E, SERIES, 25/90, TW
300 GAL. E, SERIES, 25/90, TW
200 GAL. E, SERIES, 25/90 REGLASSED, TW
100 GAL. E, SERIES, 25/90, TW

OVER 100 GLASS LINED REACTORS IN STOCK

GLASS LINED TANKS

FROM 5-22,000 GALLONS
TRAILER LOADS OF GLASS LINED PARTS AVAILABLE

• LOU FALCONE–OUR G/L SPECIALIST WITH 21 YRS. EXPERIENCE IS HERE TO HELP YOU! •

STAINLESS STEEL REACTORS

30,000 GAL. 316SS, 15 PSI/COILS
20,000 GAL. 304SS, 40 & FV
11,000 GAL. 316SS, 75 PSI, COILS
9,000 GAL. 304 SS, 50/5 PSI
8,500 GAL. INCONEL, 40/60 PSI AGIT.
6,000 GAL. 304SS, 100/15 PSI
4,200 GAL. 316 ELC, 50FV/50 PSI
3,000 GAL. 316 SS, 25/90 PSI
2,800 GAL. 304LSS, 25FV/100 PSI
2,000 GAL. 316SS, 1,000/100 PSI
1,300 GAL. 316SS, 150FV/125 PSI
1,000 GAL. 316SS, 15FV/42 PSI
800 GAL. 316SS, 140FV/50 PSI (3)
750 GAL. 316 ELC, 180FV/140 PSI
500 GAL. INCONEL, 50 FV/50 PSI
400 GAL. HAST C., 210 FV/160 PSI

WE HAVE OVER 700 SS TANKS IN STOCK

CALL NOW ABOUT GIANT RHODE ISLAND & NEW JERSEY LIQUIDATION ALL EQUIPMENT STILL INSTALLED

(89) Glass lined & SS Reactor systems complete with condenser, receivers and control panels. from 50 gal. to 4000 gal.

(40) Filter Presses polypro & SS from 18" to 56" plate/ frame & recessed plates.

(25) Vacuum dryer systems complete with condensors, vacuum pumps and receivers.
Double Cone: glass & SS.
Rotary Vacuum Dryers 316 SS
Vacuum Shelf Dryers SS and Heresite lined.

(18) Centrifuges 316 SS automatic basket centrifuges complete with controls and nitrogen purge
Scrubber systems/Vacuum filter systems/Glass lined and SS tank farms.

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WE WANT TO BUY YOUR SURPLUS EQUIPMENT, PROCESS UNITS AND COMPLETE PLANTS. WE HAVE OUR OWN DISMANTLING CREWS

PLEASE CALL CHARLES MASON FOR FURTHER INFORMATION AT 609-443-4545

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GOOD, USED, CHEMICAL PHARMACEUTICAL & RELATED EQUIPMENT - CENTRIFUGES DRYERS, FILTERS, REACTORS TANKS ETC.
WE WILL PURCHASE INDIVIDUAL ITEMS OR COMPLETE PLANTS.
CALL OUR OFFICE TODAY. TOP DOLLARS PAID. NO DEAL TOO BIG OR TOO SMALL.

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RECENT PURCHASES

•• FILTER BONANZA ••
Sparkler pressure leaf Filters, All stainless Steel Construction
2-Model #33D9
1-Model #18D12
1-Model #184D
1-Model #33S28

Model DASO - 6 jkt Fitzmill, SS
Model DASO - 12 jkt Fitzmill, SS
15"x 12"x 42" SS Pugmill, 3HP Varispeed
40"x20" Tolhurst centrifuge, Kynar lined, perf. basket
4500 Gal SS mixtank, 50 psi
3500 Gal SS mixtank, 50 psi
400 gal. G/L Pfaudler Vert Reciever, 55 Psi.
1750 gal. Reactor 316 SS, 15 PSI Int. 40 psi Jckt.

St Regis Bag Packer, Model#718 MLT.
5000 Gal. 304 SS jcktd., Mix Tank
2' dia. x 3' Chrome Plated Flaker
Alfa-Laval Centrifuge, Model NX214/314.
8000gal. CS, Ammonia Storage Tank, 250 PSI.
60 cu. ft.PK Blender 304 SS w/Int. bar
63 cu. ft. C/S Marion Paddle Blender
2 cu. ft. PK Blender w/pin bar SS
175 cu. ft. PK Blender 316 SS
3.5 cu. ft. Prodex-Henschel Mixer, SS
500 liter Welex Mixers, SS
Littleford FKM-600 Mixer SS (2)
1000 gal. 316 SS Reactor, 15 & FV/50 psi jkt., 10 HP
1000 gal. 316 SS Reactor, 100/30 psi jkt., 10 HP

DRYERS

Drum Dryers/Flakers
(1) 24" dia. x 36" Buflovac SS dble. drum dryer
(2) 32" dia.x 108" Blaw Knox CI dble. drum dryer
(1) 32"dia. x 17'6" Sandvik SS belt flaker
(1) 36"dia.x 10' Buflovak CI dble. drum dryer
(3) 42"dia.x120"Blaw Knox CI dble. drum dryer
(1) 48"dia.x 28" drum flaker, chrome plated drum
(1) 48"dia.x 40" CI flaker, mfg. by Buffalo Foundary
(1) 48"dia.x 40 drum flaker, nickel plated drum, mfg. Blaw-Knox

Fluid Bed
(1) 60 Kg. Aeromatic, Batch, 6'x9', 56,000
(1) 100 Kg. Aeromatic Model ST 100, sanitary SS
(1) Fitzpatrick Model FA 250, SS, 20 HP XP

Holoflite
(1) Western Precipitation Model P80SSO-A, twin screw, 12" dia. x 20' long, SS constr., jckt. rated 15 psi, complete with 7.5 HP vari-speed drive.
(1) New/Never-Used Joy Processor, CS, single screw, 16"x16' long, rated 110 psi @ 340° F., sprocket & chain drive by 1.5 HP varispeed drive.

Rotary Vacuum
(1) 200 Cu. Ft. Stokes, SS constr., complt.
(2) 165 Cu. Ft. Pfaudler, Double Cone, G/L, 30 &FV/50 psi jktd., 15 HP vari-drive
(1) 160 Cu. Ft. Blaw Knox, Nickel
(2) 132 Cu. Ft. Stokes, Nickel
(1) 72 Cu. Ft. Blaw Knox, SS
(1) 60 Cu. Ft. Titanium Double Cone
(1) 50 Cu. Ft. Gemco, 316SS sanitary, double cone
(1) 37.8 Sq. Ft. Horiz. Thin Film, vac. int. & 150 psig, 304/316SS
(1) 37 Cu. Ft. Gemco, SS
(1) 30 Cu. Ft. P-K Twin Shell, 304SS
(1) 20 Cu. Ft. Abbe Twin Cone, 304SS

Spray
(1) 30"x3' Bowen Laboratory w/3' cone bottom, SS constr., w/centrifugal atomizer, 3 HP blower & motor.(1)
(1) Niro lab size 32"diax2'w/2'cone w/centrif. atomizer SS contacts
(1) 18' dia. Bowen complt. system SS contacts, new 1976

CENTRIFUGES

(1) Delaval BRPX 309, SS, 20HP
(1) Unused Model B-10 Podbielniak, Alloy 20
(1) Sharples AS-26, SS
(2) Sharples AS-16P, 316SS
(1) Alfa-Laval SS Decantor, Horiz., Mdl. NX314
(2) Dorr Oliver Mdl. CH30 CSU "Merco." 316SS contacts, 150 HP
(1) Baker Perkins S-82 "Pusher Type," SS, 60 HP
(1) Bird 18" x 28", 316 ELC, contour bowl.
(2) Bird 24"x38", 316SS, 40 HP
(3) Sharples P-3000, 316SS, 30 HP
(1) Sharples P-1000, SS 20HP
(1) Unused Bird 36 x96, 317L SS
(1) Tolhurst 48" x 24" perf. basket, 316SS sanitary, auto. plow & discharge, rated 85 #/cu. ft. @ 900 RPM, 20 HP XP.
(1) Tolhurst 48" x 24" Batchmaster, 316SS, perf. basket, w/hydr. plow & 20 HP hydr. drive
(1) Tolhurst 48"x24" Batchmaster, rubber lined, perf. basket, w/hydr. plow & 20HP hydr. drive
(2) Tolhurst 48" x 24" Batchmaster, Heresite lined, perf. basket, w/hydr. plow & 20 HP hydr. drive
(1) Western states 48"x 24", 316 SS
(1) Fletcher 48"x 28" Suspended type, SS perf. basket, 20/10 HP
(1) Sharples Tornado 48" x 30", 316SS, perf. basket, 40 HP XP
(1) Alfa Laval Model MAPX 210.T24, SS wetted parts
(2) Sharples C-27, 316 SS, wetted parts, 40 HP
(1) Sharples C-20, Super-D-Hydrator, SS, 30 HP
(1) Dorr Oliver Mercone Screener Model C-400 X2, all SS, twin screw disch., 10 HP

PARTIAL LISTING ONLY

EVAPORATORS

(1) 1 Sq. Ft. Artisan "Kontro" Ajust-O-Film sys., 316SS
(1) 1.4 Sq. Ft. Luwa Wiped Film, 316SS, 1.5 HP
(1) 1.4 sq. Ft. Luwa thin film SS
(1) 2.5 Sq. Ft. Rodney Hunt Turbo Film 347 SS
(1) 5.4 sq. Ft. Luwa filmtruder, 316 LSS
(1) 6.54 Sq. Ft. Votator Evaporator System,316 SS contracts, 15 psi & FV & int., 160 psi jkt.
(1) 8.7 Sq. Ft. Rodney Hunt Turbo-Film, 304 SS contact parts, 15 psi & FV/150 psi jckt.
(1) 10.8 Sq. Ft. Luwa SS Wiped Film Evap. System, 15/550 psi
(1) 19.5 Sq. Ft. Votator Turba-Film, 304 Sanit. SS FV/150 psi 10HP
(1) 20 Sq. Ft. Kontro Horiz. Adjust-O-Film, 316ELC, 50 psig, 15 HP
(1) Approx 31 Sq. ft. Vert., Turbo-Film Processor, 304 SS Contacts
(1) Like New 37.8 Sq. Ft. Luwa Horiz. Thin-Film Dryer, 304/316L SS
(1) 40 Sq. Ft. Kontro Adjust-O-Film, SS constr., 20 HP
(1) 47 Sq. Ft. Artisan rising Film, Hast. "C"
(1) Approx 51 sq. ft. Pfaudler Wiped film, 316 SS, 100/85 & FV
(1) 60 Sq. Ft. Kontro Wiped Film Syst., SS constr., FV/150 psi, 40 HP
(1) UNUSED 88 sq. ft. Luwa thin film dryer horiz. 316 L wetted parts, FV int., 150 psi sat steam jkt.
(1) 141 Sq. Ft. Rodney Hunt Turbo-Film, 316 SS 15 psi int., 35 psi jkt 40 HP XP

•••TANKS-ALL TYPES & SIZES

BLENDERS

800 Cu. Ft. jktd. Dbl.Rbn., CS
Approx. 480 Cu. Ft. CS, 75HP
UNUSED 460 Cu. Ft. Marion Paddle, CS, 75 HP
300 Cu. Ft. CS Dbl. Cone, 30 HP
200 Cu. Ft. KS 316SS Dbl. Cone
175 Cu. Ft. P-K Twin Shell, 316SS
69.3 Cu. Ft. CS Dbl. Cone, 7.5 HP
63 Cu. Ft. Marion Paddle, CS
60 Cu. Ft. 304 SS P-K. Twin Shell, w/Int. bar
60 Cu. Ft. Gemco Dbl. Cone, 304SS
37 Cu. Ft. Gemco SS
30 Cu. Ft. P-k, 304 SS, W/liq. bar.
20 Cu. Ft.P-K, Twin shell, SS
16 Cu. Ft. Robinson Dbl. Rbn. CS
15 Cu. Ft. WC Marion SS
10 Cu. Ft. Gemco dbl. cone, CS, 1½HP
10 Cu. Ft. P-K Sanit Twin Shell 1½HP
10 Cu. Ft. Howes, CS, Dbl. Rbn.
5 Cu. Ft., SS, Dbl. Cone W/liquid-solids bar
2 Cu. Ft. P- K Twin Shell, SS Constr., w/pin int. bar
10" P-K zig zag

FILTERS

Pressure Leaf
1–562 Sq. Ft., 316ELC, Hercules, 28 leaves
1–512 Sq. Ft., 316SS, Niagara, 21 leaves
1–400 Sq. Ft. R/L Sparkler
1–327 Sq. Ft., 304SS, Ind. Filter, 11 leaves
1–320 Sq. Ft. Durco 316 SS, 11 Leaves
1–259 Sq. Ft. Pronto Mdl. #3259, 75 psig
1–200 Sq. Ft., SS, Hercules, Horiz.
1–191 Sq. Ft. Enzinger, SS, Vert., 75 psi
1 - 157.64 sq. Ft. Sparkler model 65-5-28, 316SS
1–150 Sq. Ft. Horiz., 12 Vert. Leaf 316SS
1–135 Sq. Ft. Ni, Bowser, Vert.
1–35 Sq. Ft. Hercules Model 5, 316 SS, horiz. tank vert leaves 50 psi

Rotary Vacuum
1–56.5 Sq. Ft. KS, Inconel 600
1–56.5 Sq. Ft. K-S, 316SS, flexibelt disch.
1–87.92 Sq. Ft. Feinc, SS wetted parts, spring disch., 56" dia. x 6' face drum
1–132 Sq. Ft. Dorr Oliver, 304SS, maxi-belt disch.
1–200 Sq. Ft. Eimco, 316SS, 8'x8'
4–250 Sq. Ft. D.O. 316L SS Precoat, 8" x10', sanit
1–250 Sq. Ft. K-S 316SS, coil disch.
1–300 Sq. Ft. Eimco, 316SS wetted parts, precoat type w/knife disch., 10" dia. x 10' drum, complt. w/control panel & aux. equipment
1–314 Sq. Ft. Eimco, precoat disch., 316SS
1–400 Sq. Ft. Eimco, CS, Precoat
1–500 Sq. Ft. Eimco, 316SS, belt disch.
1–3'x1' 316SS, knife disch.
1–3'x1' Dorr Oliver, FRP w/receiver & Nash H4 vac. pump, 10 HP
1–3'x 1' K-S comp. sys., 316 SS Flexbelt disch

CHEMICAL PLANT LIQUIDATION - KEARNY, N.J.

(1) 12' dia.x 70' Rotary Dryer, SS constr., 125 HP
(1) 3400 Gal. jkt'd Tank, SS constr., 150 HP jacket
(1) 10,000 Gal. Mix Tank, SS constr., 13' dia x 10', 30 HP
(2) 10,000 Gal. Mix Tanks, w/int. coils 13' dia x 10' 30 HP
(1) 8' dia x 50' Rotary Dryer Mfg. by Bartlett Snow, SS constr., 100 HP
(1) 1700 Gal. Mixer Tank, SS 6' dia. x 8'
(1) 8' dia x 50' Steam Tube Rotary Dryer, SS clad, 40 HP
(1) 2,600 Gal. Storage Tank SS constr., 7' dia x 9'
(1) 4,300 Gal Storage Tank, 304 SS, 9½'dia x 8'
(1) Butler Building

Many Screw Conveyors Available, Various Sizes, CS & SS Construction
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ATTRACTIVELY PRICED

1 - Approx. 51 Sq. Ft., Pfaudler, Wiped Film Evapor. 316 SS wetted parts ASME Coded, jacket rated 100 psi w/internal vacuum. Complete w/flange mounted motor to Pfaudler TW drive w/mechanical seal, lubricator, & integral heat exchanger. Call today for more details.

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WE ARE EXPERTS AT DISMANTLING, REERECTION, RIGGING DEMOLITION AND ASBESTOS REMOVAL WITH TERRIFIC REFERENCES BOTH NATIONALLY AND INTERNATIONALLY
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WE ARE GLASS SPECIALISTS WITH A TREMENDOUS INVENTORY FEATURING UNUSED, USED AND REGLASSED ITEMS. OUR SHOP PERSONNEL ARE FULLY TRAINED TO HANDLE GLASS.

REACTORS

Glass Lined
4,000 Gal. Pfaudler, 100/90 psi, TW
4,000 gal Pfaudler, 50/30 psi
3,700 gal Glascote, 50 & FV/90 psi
3,000 gal Glascote, 50 &FV/ 90 psi
3000 gal Pfaudler, 75/90 psi
2,000 gal Pfaudler, 75/90 psi
1,000 Gal. Pfaudler, 100&FV/90 psi, 4RW
1,000 Gal. Pfaudler, RA60 Series, 100& FV/90 psi, 4DW
1,000 Gal. Pfaudler, RA60 Series, 100& FV/90 psi, 4TW
800 Gal. SS clad, 60/60 psi
750 gal. DeDietrick, Phila drive
500 Gal. Pfaudler, 100&FV/85 psi, BH drive

Stainless Steel
4,000 Gal. 316SS, Atmos./50 psi, withcoils
3,000 Gal. 347SS Blaw Knox, 150/50 psi
2,500 Gal. 316L SS, 75/75 psi, 150 psi int. coils
2000 Gal. Nooter Autoclave, 316L 2000 psi, FV int. coils
2,000 Gal. Dusenberg, 316 SS,15/35 & FV int., 50 psi jkt.
1,750 Gal. 316SS Nolte, 1467/50 psi
1,500 Gal. 304SS, 10 HP Lightnin
1,500 Gal. 304 SS, 100/30 psi
1,000 Gal. 304SS, 250/80 psi
1,000 Gal. 316SS, 50/75 psi jkt
1,000 Gal. 316 SS, 15 & FV/50, 10 HP
1,000 Gal. 316 SS, 100/30 10 HP
750 Gal. 316SS, 75 & FV/50 psi
750 Gal. 304SS, 50/60 psi
600 Gal. 316SS, 3000psi, 10 HP
600 Gal. SS, 50 psi, 1.5 HP XP
500 Gal. 316SS, 55 & FV/55 psi
100 Gal. 316SS, 15/50 psi
100 Gal. 316ELC SS, 500/90 psi

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4-DRAIS SAND MILLS, TYPE PM-60-STS-DDA. MANUFACTURED 1984-85.
PRICED TO SELL • CALL FOR DETAILS

MIXERS

4.5 Gal. Kneader Master Cont., SS w/jkt.
5 Gal. AMK 304SS Jcktd. Kneader Extruder
15 Gal. W.C. Readco Sigma Blade Dbl. arm
25 gal. Readco DBL/Arm Sigma Blade jktd. SS construction 15 H.P.
80 Gal. Hockmeyer Pony, SS contacts, 7.5 HP varispeed
100 Gal., SS, Sigma Blade, Jcktd. 40 HP
200 gal. W-P CS dble arm Sigma blade, 20 HP
250 gal. AMK Kneader Extruder, Sigma Blades, CS construc, 40 psig,trough jkt.
500 liter Welex hi intensity, SS contact parts
500 Gal. S-W Rubber Cement, CS, 2-10 HP motors (2)
Unused 1000 Gal. Sanitary 316SS B-K Dbl. Motion Change Can; 100&FV/165 PSI, 125HP
Littleford Model FKM-600D, SS
Littleford Model FKM-600S, SS
Littleford Model FKM-2000, SS, w/choppers
Littleford Model FM 100 Sanit. SS w/choppers
3.5 Cu. Ft. Prodex Henchel Mdl. 35 J SS, SS Const.
7 Cu. Ft. 304SS Nauta Model MBX-70
10.6 Cu. Ft. Nauta D-105, CS
10 HP Hockmeyer High Speed Disperser
Welding Eng. Model 2FV1V2S Twin screw Extruder, SS, Contacts, 150 psi
Koehring mdl. 350, 40 HP

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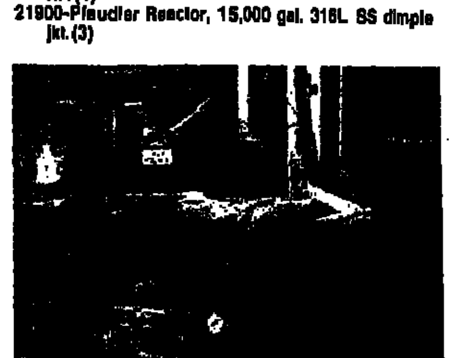
LARGE POLYSTYRENE PLANT

21898-Brighton Corp. 12,000 gal. vessel.

21875-Bins, 176 cu. ft., S/S, cone bottom flat top. (4)
21891-Bins, 450 cu. ft., C/S, epoxy lined. (8)
21904-Bins, 450 cu. ft., C/S, epoxy lined. (6)
21905-Bins, 500 cu. ft., C/S, epoxy lined, flat top, conical bottom. (4)
21918-Worthington cent. pump, C/S, 15 HP, 200 GPM at 44 psig (2)
21916-Union Pump-Inline, C/S, mod. 4x6x8.5 VCK, 40 HP. (3)

21888-Strong Scott Rib Blender.

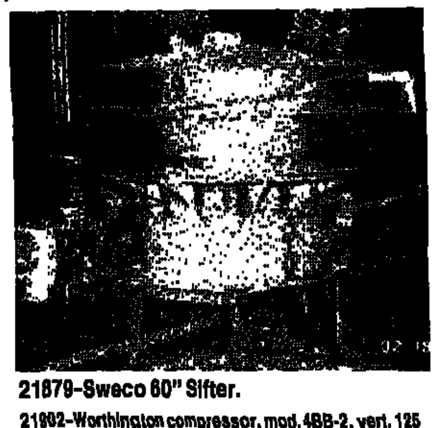
21917-Ingersol Rand Pump, in-line pump, C/S, 30 HP.
21915-Goulds, C/S turbine pump, 200 HP. (2)
21913-Worthington cent. pump, S&S, 2 HP. (4)
21912-Union pump-inline, S/S, 7.5 HP (2)
21899-Pfaudler Reactor, 1,500 gal., 316L SS dimple jkt.
21896-Pfaudler Reactor, 10,000 gal. 316L SS clad, 60 HP. (4)
21900-Pfaudler Reactor, 15,000 gal. 316L SS dimple jkt. (3)



21871-Prodex 8", 30:1 L/D Extruder.

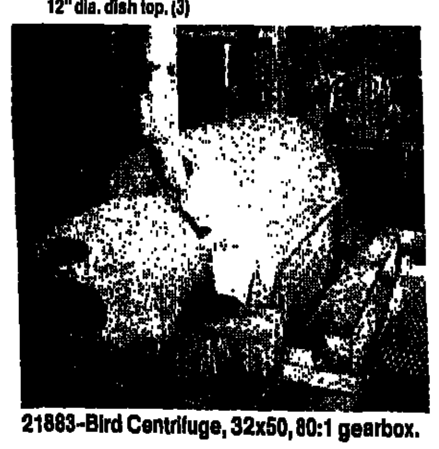
21906-Edw Renneburg Rot. Dryer, S/S, steam heat, 10 HP. (4)
21881-Heaters, C/S steam, type BNF 2420 (8)
21914-Flotronics bin vent, filters, 122 sq. ft., 12 bags.
21890-Katron feeder, twin screw volumetric, S/S. (4)
21889-Katron Feeder twin srew, S/S mod. 5400-150 (4)
21901-Sparkler filter, 352 sq. ft. C/S, mod. VR-32-32.
21882-Screw conveyor, 304 SS, 7" dia. x 11L, 1.5 HP.
21888-Strong Scott Rib Blender, 25 cu. ft., 5 HP. (3)
21920-Welex extruder 6", 30:1 L/D, 400 HP.
21870-Welex extruder 8", 30:1 L/D, 600 HP.
21876-Conair pelletizer, S/S, mod. 1024, 40 HP. (2)
21874-Water bath, S/S, portable. (4)
21907-McMillan hyd. pump, 2 HP (2)
21887-Ross Static Mixer, 304SS, 3"x6 element. (4)

21877-Witte screeners, mod. 260-D S/S (2)
21878-Gorman Rupp pump, centrifugal, C/S mod. 82EZ
21871-Prodex extruder 8", 30:1 L/D ratio, 600 HP.
21872-Welex extruder 8", 30:1 L/D ratio, 700 HP.
21873-Welex extruder 8", 30:1 L/D ratio, 700 HP.
21919-Welex extruder 8", 30:1 L/D ratio, 700 HP.
21892-Buffalo blower, size 30, C/S, 10 HP (3)
21908-Buffalo exhaust fan, size 36, type B, 15 HP.
21880-Sutor Bill Blower, C/S, 40 HP. (4)
21922-Buffalo blower, type 40-3CB, 40 HP. (4)
21894-Buffalo blower, mod. 45-3CB, 75 HP. (3)
21883-Bird, 32 x 50 centrifuge, 80:1 gearbox. (4)



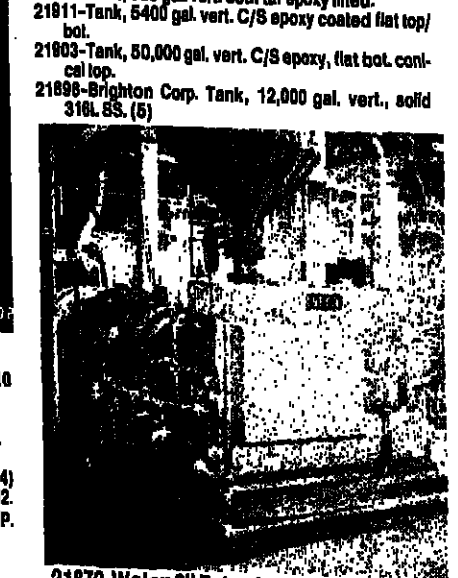
21879-Sweco 60" Sifter.

21902-Worthington compressor, mod. 4BB-2, vert. 125 psi. (2)
21879-Sweco sifter 60", mod. LS60S88, 2.5 HP.
21923-Kason sifter 60", mod. K601SS, S/S, 1 HP.
21884-Flotronics Cyclone mod. FTHEC370-T, 304 S/S 12" dia. dish top. (3)



21883-Bird Centrifuge, 32x50, 80:1 gearbox.

21893-Environeering scrubber, mod. A33-14000
21895-Tank, 850 gal. vert. coal tar epoxy lined.
21911-Tank, 5400 gal. vert. C/S epoxy coated flat top/bot.
21903-Tank, 50,000 gal. vert. C/S epoxy, flat bot. conical top.
21898-Brighton Corp. Tank, 12,000 gal. vert., solid 316L SS. (5)



21870-Welex 8" Extruder, 600 HP.

21897-Metal Arts Corp. vessel, 17,000 gal. vert. 317L SS. (2)
21910-Tank, 840 gal., flat top & bottom.
21920-Modern Welding Tank, 4800 gal. horiz. rubber lined.

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MUST MOVE STAINLESS TANKS
12,000 GAL., T304SS, 12'Dia.x 14' high, flat bottom, open top (16)
PRICE $8000 ea. FOB PA #20655

TANKS-S/S

21283-Tank, S/S vert., 1200 gal., 6 dia x6, flat top & bot
20651-Tank, SS, 9000 gal., agit., 12' dia x 14 6 H
20655-Tank, SS, 12000 gal., 12' dia x 14', flat bottom open top.
17043-Jos Oat horz. tank, 304SS, 16,000 gal., 12'6" dia x 22'9½" long, 10 PSI.

UNUSED CENTRIFUGES

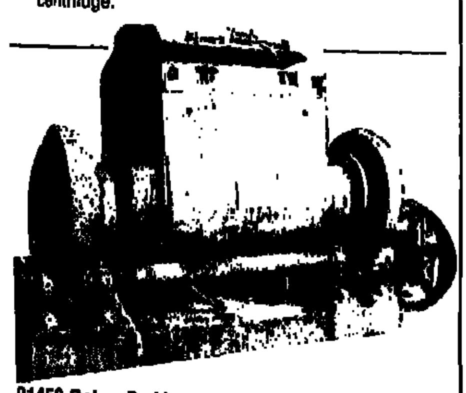
21593-Sharples P5400 Sanitary Centrifuges w/200 HP motor, 25 HP backdrive, gearbox, 5" pitch conveyor, CIP, control panel (2) LATE MODEL

CENTRIFUGES

20827-Bird, 18"x24" steel, conical bowl.
20826-Bird, 24"x38" steel, con bowl, gearbox
20819-Bird, 24"x38", S/S, 15 degree, contour bowl
20684-Bird 24"x60", H series, steel w/motor
20364-Bird 32"x50", SS T316 contour, 75HP.
12883-Bird 36"x96" contour, 10 deg., T317 ELC
20137-Alfa Laval, NX 418-B31-60, 316SS, gearbox
17308-Dorr Oliver, 304SS, Merco mdl. 16L, 30 HP
13565-Sharples, mdl. P 600, gearbox, motor
19767-Unused Sharples, 3 phase, P3000, S/S, carbide
20407-Sharples P2000 316SS, 20 HP drive motor
21359-Sharples P3000 w/gearbox
20686-Sharples P3000, 52:1 gearbox, S/S casting
21725-Sharples, P3400, S/S, gearbox & motor.
19249-Sharples, P5400, 316/317SS, 200 HP, gearbox

CENT-BASKET VERT.

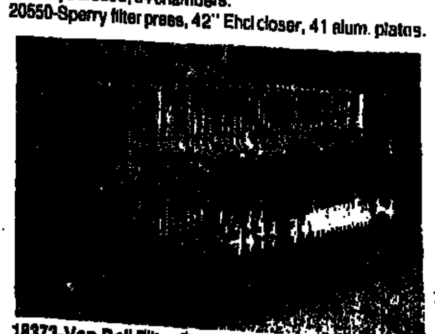
21408-Delaval 22"x16" perf. basket hyd. drive
15815-Delaval Mark III, perf. basket, 40"x24", 316SS, 30 HP, hydr., drive.
19446-Sharples Sludge-Pak, SP-5500, 40"x24" basket centrifuge.



21459-Baker Perkins Mixer, dbl. arm, C/S, 300 gal. Geared both ends, 100 HP, mod. 18JUMMZ.

FILTER PRESSES

19846-Shriver P&F filter press, 12"x12" alum. plates, closed delivery, 23 chambers.
20534-Sperry Filter Press, 30", alumn.
20539-Sperry filter press 30", 35 Aluminum plates, 357 sq.
15370-Shriver 32" x 32", polypropylene, 27 plates, ratchet closing.
15929-Shriver ALP, plate & frame, 18 36" x 36", S/S recessed plates.
20076-Sperry filter press, 36", cast iron plates, closed delv.
19462-Independent filter press, 42" x 42", polypropylene, 4 eye closed, 34 chambers.
20550-Sperry filter press, 42" Ehd closer, 41 alum. plates.



18373-Von Roll Filter Press, polypropylene plates & frames, 32 chambers, 722 sq. ft. filter area.

LIQUIDATION SALE PERRYVILLE, MD

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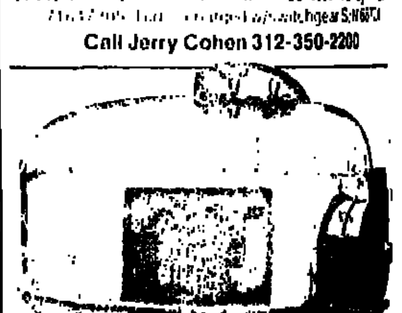

21772 Druckbehälter (Rosenmund Type) Pressure ... 117" Dia., 75 Sq. Ft., jacketed, agit. 15 HP, Side Discharge
Call Herb Landy (312) 350-2200

REACTORS

... 4000 gal., 316SS, vacuum
Pfaudler 10,000 gal. reactors T316L, 100 psi ...
Pfaudler 15,000 gal. reactor T316L, 100 psi ...

MIXER/EXTRUDER

19826 AMK 50 gal. ST, jkt., Sigma.
19421-AMK 75 gal. ST, jkt., Sigma, 10" disch. screw.
17130-AMK 120 gal., ST Sigma, 11.5" screw.
14032 AMK 150 gal., S/S, Sigma 15HP main, 10HP [illegible]
19494 AMK 150 gal., S/S Sigma, 50 HP main, 10HP [illegible]
20116 AMK 150 gal., ST, Sigma, 15 HP/10 HP
503527-New Aaron 300 gal., T304SS, mix extruder, jkt., up to 200 HP main, 75 HP hyd. screw.
STILL INSTALLED . . . CALL NOW

21350-B.P. 500 gal. Sigma steel, 125 psi, 150 HP, Hyd. tilt

MIXERS – PLOW

503755-Littleford, FKM 600D, SS jacketed, 25 HP
20754-Littleford, FKM 3000D 65 CF, S/S, full jacket, 100 HP
19214-New Plow Mixer, 80 cu. ft. 347SS, jacket, [illegible]
20829-Littleford FKM 4200D, S/S, 87 cu. ft. JKT. [illegible]

MIXER RIBBON

21120-Ribbon Blender, S/S, 10 cu. ft., jkt. [illegible]
20276-Read ribbon blender, 14.7 cu. ft. [illegible]
20616-Unused Day, 316SS, 23 cu. ft. [illegible]
20189-Robinson, 25 cu. ft., S/S, jacket [illegible]
20985-Int'l 34 cu. ft. S/S dbl. ribbon [illegible]
20212-Haas ribbon, 36 cu. ft., S/S, 15 HP [illegible]
19268-Ribbon Mix 60 cu. ft. T304 SS [illegible]
19586-Howe, 115 cu. ft., sanitary S/S [illegible]
20993-Strong Scott blender, 130 cu. ft. [illegible] motor.
21124-Ribbon Blender, 304SS [illegible]
20614-Unused JH Day ribbon, S/S [illegible]
21114-JH Day ribbon blender, S/S [illegible]

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CENTRIFUGES

SHARPLES P-4000 S/S Vert. (Rebuilt)
SHARPLES AS-16, 16V, 26 S/S clar./sep. (Rebuilt)
BAKER PERKINS HS-10W S/S "Lab" peeler
BIRD 24x60 ST/CCF design
WESTFALIA SAMR 5036 SS 15 HP
DELAVAL ACVO Disc/Nozzle SS 20 HP
KRAUSE-MAFFEI 18.5" Pusher S/S (Rebuilt)
SHARPLES P-3400 SS horiz. solid bowl
ALFA-LAVAL NX-214SS DECANTER 20 HP
SHARPLES 48"x30" T-1600 AUTO 316 SS
SHARPLES Mark 3 14" SS perf. auto basket

MIXERS/BLENDERS

PK 2 cu.ft. SS Twin Shell
Readco 5 gal. SS dbnl.arm jkt vac. 5 HP
135 cu.ft. dbl rib STL jkt. 30 H.P.
300 gal. J.H. Day Pony Mixer Steel w/can
J.H. Day 300 Gal. S/S dbl. arm tilt
(2) Vrieco 100 cu.ft. S/S Nauta Mixers
P/K 10, cu.ft. SS Tw/Sh. w/Liq-Sol bar
Readco 300 gal. S/S dbl. arm 60 HP

DRYERS

Patterson 49 cu. ft. rot. vac. cyl. S/S 3'x 7'
P/K 5 cu.ft. SS liq-Sol. Processor
LOUISVILLE 8x45 SS Rot. Hot Air-Steam
BOWEN 4'6" No. 2 TOWER SPRAY DRYER S/S GAS NOZZLE
Spray Dryer, Bowen 30" lab, Niro 48" utility S/S

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SPARKLER 18-D-5 S/S Vert. Tank Press Leaf 60#
2.5'x 13' S/S Vacuum Belt Filter
18",24",36",42" P/F Presses C.I. Poly or S/S
SPARKLER HRC 150, 200 S/S Horiz. Press. Leaf
35,50,150,300 sq.ft. Press Leaf S/S

TANKS/REACTORS

29,000 GAL. HORIZ. 316SS Tanks 40# (2)
300 Gal. Groen S/S Kettle (jkt)
1,200 GAL. T-316 SS REACTOR 30 75/# JKT. w/AGIT.
12000 Gal. Horiz SS w/Top Agit, DH. Hds.
2900 Gal. 250#/FV-85#/jkt. 15HP
30,50,150 Gal. S/S Reactors 100#/75#
16,000 gal. 304 SS vert. w/coil & agit.

MISC. SPECIALS

PK 75 cu. ft. S/S TW/SH mixer w/bar
65 HP MODULATIC Boiler 250 psi Gas Fired
15 HP, 30 HP, Agit Drives, variable 25-100 RPM
SIMPSON 1½F, 3F, S/S MIX MULLERS
6'6"x 78' Autoclave 150# w/track QOD
-FITZ Mills S/S D, D12, FAS012 & Chilsonators
7'x(any length) AUTOCLAVES 100# Code W/Track
-100-10,000 sq.ft. Ht./Exchr's S/S & C/S
150 cu. ft. P/K Twin Shell stl. 10 HP
-100-10,000 gal. G/L Tanks & Reactors
DAY 100 gal. S/S dbl. arm sigma jkt. vac.

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Call for Details
PRICE: $30,000. each FOB PENNSYLVANIA

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PLANT SITE SPECIALS

36"x72" Bird horiz. solid bowl cent. stl.
Stansteel 8x50 Rot Hot Air Dryer w/Burner. C/S
50 gal. J.H. Day Pony Mixer Steel W/Can
2000 gal. Pfaudler G/L reactor w/agit.
Bird 40x60 316 S/S Cent. 114:1 100 HP
Feinc. 5'x7' S/S Rot Vac filter
150 cu. ft. Munson Mixer S/S jktd.
12,000 gal Frp Vert. Tanks (2)
1000 gal. Pfaudler G/L reactor 75#/75# w/agit.
Bird 18x28 S/S Contour Bowl Centrifuge
P/S 6' x 45' SS CONEVER DRYER
22,500 Gal. Tank/Silo SS Vert 12 ft. x 24ft.

SAVE

JUST PURCHASED

Niagara 24 sq. ft. Press. leaf filter S/S
200 gal. S/S reactor 150#/150# w/agit.
200 gal SS vacuum receiver
Foremost HD-6 Granulators 14x18 (3)
108", 80" 54", 41", 32", extrusion sheet lines
Miro-Pulv 1 SH SS 5 HP w/screw feed
M/G Homogenizer 250 M12-8 TBS (8000 PSI)
Patterson, Abbe 3,5 cu. ft. S/S dbl. cone vac. dryers
Stokes 73 sq. ft. S/S vac. shelf dryor
B/P 50 GAL. STL. D/ARM MIXER JKT. W/DRIVE
Gehnrich Oven SS 6 trays steam heated
250 gal. S/S Reactor 30#/125# jktd. w/agit

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NEW YORK PLANT — Modern, Rebuilt Machinery — CHICAGO PLANT

Huge Savings! In Stock! Immediate Delivery!

MIXERS

LITTLEFORD FKM5000, FKM2000, FKM600D & Lab. SS
BAKER PERKINS & DAY Sigma 20, 50, 100 & 150 Gal.
DAY, MARION & LOWE SS Spiral, 5 to 100 cu ft
PATTERSON KELLEY Lab., 5 & 10 cu. ft & 12" SS Zig Zag
AMF "Glen" 340, 160 & 120 Qt Vertical
FALCON M800A 7 cu ft. SS -sanitary
HOBART V1401 (140 qt.) 80 & 60 qt. Vertical
DAY MBX350 "Nauta" 35 cu. ft. SS
HOCKMEYER Big "H" 60 & 80 Gal. SS Pony
OAKES 10M & 14M Slurry
DAY, B.P. & ABBE SS Jacketed Lab: 1 Qt. to 5 Gal.
BRAMLEY 25 & 50 Gal. SS Double Arm Duplex
GIRDLER, 1, 2 & 3 Tube Votators
LEE & GROEN SS Cooking & Mixing Kettles 10 to 200 Gal.
CREPACO & CHERRY BURRELL SS Jacketed Processors 100 to 1000 Gal.
CHARLOTTE & TRI HOMO Colloid Mills
GIFFORD WOOD & EPPENBACH HOMOMIXERS

PULVERIZERS

MIKRO "Bantam," 1SH, 2TH, 3TH, & 4TH SS
FITZPATRICK DASO6 & D6 Comminuters
FITZPATRICK GC Gullocutters, J Homoloid Mills, CS-31 Prebreaker & L Malaxator
RIETZ RE6K & RE12K SS Extructors
RIETZ RP12 Disintegrator
STRONG SCOTT SS Turbulizer
URSCHEL MG1700 & MG1300 Commitrols
STOKES "Tornado Mill"
QUADRO Comomil
PALLMAN, RAYMOND, SCHUTZ-O'NEILL, MOREHOUSE, BAUERMEISTER & ALPINE Grinders
DAY & LEHMANN 3 & 5 Roll Mills
PREMIER 5 HP Variable Speed Dispersator

TABLET DEPARTMENT

STOKES BB-2 RD3, R4, R & T Presses
MANESTY Betapress, D3RY, BB3A, BB3, & 35T Presses
STOKES & SKERMAN 30", 38", 42" & 60" SS Coating Pans
PELLIGRINI T800 SS Coating Pan
MERILL 88-14 Tablet Counter

FILLERS

MATEER 34B HiSpeed Auger
COZZOLI LF840 8 Piston Automatic SS
PNEUMATIC 30, 24, 18 & 8 Head Rotary SS
MRM, HORIX & KIEFER 30, 24, 16, 12 & 8 Head Rotary
ELGIN & HOPE 2, 4 & 8 Piston
MATEER 31A, 33A & 37 A Auger
ARENCO GAB, KALIX & COTUPLAS Tube
FILAMATIC DAB, AB4
mG2 & ZANASI Capsule Fillers
PERRY Accofil
BURSA F3 & BOCK Fillers
NALBACH High Speed Power Filling Line

LABELERS

WORLD Super CM Compack 7 & 14
DENNISON, LABELAIRE, FASSON, NEW JERSEY, STANDARD KNAPP BURT & MRM

CAPPERS

CAPEM D8F, D6F, C4F, C2F & SIF
PNEUMATIC SCALE 4 & 8 Head Pneumacappers
RESINA U40, U41, S30, S20, LC, FA & SA
PERISTOPPER, WEST, PMC & KINSLEY
CANCO, CONTINENTAL & ANGELUS Can Seamers
RESINA FW Rectangular Spice Fitment Applicator

MISCELLANEOUS PACKAGING

BARTELT IM7 Packager
DOBOY, SCANDIA, HUDSON SHARP, WRAP KING, ROTO WRAP & CIRCLE
HASSIA, KLOCKNER & WRAP ADE Strip Packagers
HAYSSEN "Ultima," PACKAGE & TRIANGLE FFS
JONES, BIVANS, CECO & SUPERIOR Cartoners
ICORE, ILLUMATRONIC & METRAMATIC High Speed Checkweighers
U.S. BOTTLERS Sanitair, McBRADY, PNEUMACLEAN & STANDARD METAL J1600
AIDLIN, MSS, MEYER & ISLAND Unscramblers
WELDOTRON, MAHAFFERY & SENTINEL Shrink Packagers
PADLOCKER, ABC & ELLIOTT Case Sealers

MISCELLANEOUS PROCESSING

STAR, NIAGARA, HERCULES & REPUBLIC SS Filters
SWECO, GREAT WESTERN, ROSS, BAUERMEISTER, ALLIS CHALMERS & ROTEX Sifters
TEKNIKA, SHARPLES & INTERNATIONAL Centrifuges
FITZPATRICK FA150 SS Fluid Bed Dryer
WAUKESHA, MOJONNIER & CP SS Pumps

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Best Cash Offers
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SELECT used machinery

LARGE BIRDS

(12) 40" x 60" Bird decanter, 316 S/St, 15/3 deg. contour, 5" pitch, single lead conveyors w/Stellite hard surfacing, 80:1 gearbox, 100 HP V-belt main motor drive. New late 60's. Excellent condition. Limited Use. Immediately Available from Stock.

(2) 32" x 50" Bird decanter, 316 S/ST, 15/3 deg. contour, 5" pitch, single lead conveyors w/Stellite hard surfacing, 80:1 gearbox, 75 HP V-belt drive. Excellent condition. Limited Use. Immediately Available from Stock.

WYSSMONT TURBO DRYER

Stainless Steel, mdl L-12, steam heated, 48" dia S/ST trays & sides w/heater controls.

VACUUM DOUBLE DRUM DRYERS

(2) Blaw Knox designed double drum dryers, 18" x 48" & 36" x 120", chrome plated, each w/-vacuum chambers & vacuum pump package. Excellent condition. Ready to Ship.

WYSSMONT DRYER

Model N-22, 8' dia trays 22 high, with stainless steel contact parts. May be shipped in one piece. Steam heated.

ROTARY FILTERS

Ametek 8' x 12' rotary w/belt discharge, 316 stainless, new 1974 - Excellent condition.

-Ametek 5' x 8½' rotary w/belt discharge, 316 stainless. New 1974 - Excellent condition.

STAINLESS DRYER

Louisville stainless steel steam tube dryer, 8' dia x 40', stainless steel clad shell w/stainless steel steam tubes.

Also Available:

Roto-Louvre mdl 900-32, 9' dia x 32' long, steam heated, 30 HP motor, all fans & Flex-Clean dust collector.

CRYSTALLIZER

Titanium contact parts, 8000 lbs p/hr capacity. New 1976. Complete and still installed.

RAYMOND ROLLER MILLS

★ ★ ★ Just Purchased ★ ★ ★

(3) Raymond high side roller mills, model 5057, double whizzer separator, fan, feeder, cyclone, duct work & bucket elevator.

LARGE SHARPLES SUPER DECANTERS

(2) Model P8100 Sharples Super Decanter, 316 S/ST, carbide tiles, 250 HP main drive, 126:1 gearbox w/backdrive. New 1979. Complete. Excellent Condition.

FLUID BED DRYER

Jeffrey fluid bed dryer, 5' x 20', 304 sanitary construction, complete installation including fans, dust collector, S/ST scrubber & controls.

EXCELLENT CONDITION

INDUSTRIAL FILTERS

(2) Industrial Filter Sysytems, 600 & 200 sq. ft. each, dry cake discharge, vulcanized rubber lined tank w/316 S/ST filter leaves, completely automated w/computer controlled actuators. Like New Condition

RESIN REACTOR

(1) 8500 gallon 316 S/Tt reactor, 30 PSI/full vacuum internal, 15 PSI jacket, 45 PSI 316 S/ST coils, 10/15 HP 2 speed turbine agitator, S/ST overhead condenser. New 1977. Still Installed. Excellent condition.

STRONG SCOTT SOLIDAIRE DRYERS

Model SJS-24-16, 24" dia x 16' long, 304 stainless, dimple jacket, 50 HP vari drive.
Model SJS-20X16, 20" dia x16' long, 316 stainless steel, jacketed.
Model SJS8X52, 8" dia x 52" long stainless, jacketed, pilot size.
Stainless steel mdl SJS-36-22 w/-jacket & 40 HP drive

JUST PURCHASED

Link Belt Roto-Louvre Dryer 10'3" x 36' long, mdl #1003-36, complete system incl 50 HP drive, firebox w/20,000,000 BTU gas burner, all fans, duct work & controls, multi-cyclone collector & Sly 30,000 CFM baghouse. Excellent Condition - Still Installed. We will load - Call for FOB Pricing

AMETEK ROTARY PRECOAT FILTERS

(1) 2' x 3', T304 sanitary stainless, complete station w/vacuum receiver, pump, mix tank & Nash vacuum pump. Rebuilt.

(3) 10' x 16', 316 stainless steel, 100 HP Roots vacuum pumps, receivers, interconnecting piping, etc. Rebuilt.

(1) 3' x 3', string discharge, 316 stainless, incl S/ST agitated through, vari speed mtr, vari speed dry on drum, 316 stainless Sihi vacuum pump. Excellent condition.

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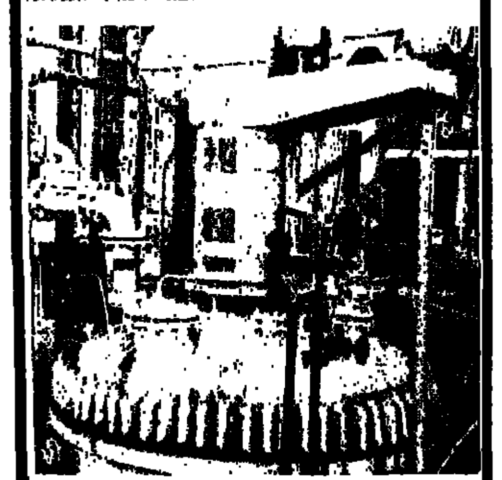

KETTLES-REACTORS, SS

30,000 gal. 304SS fermentors, 14' x 24', 25 psi/vac., coils, 200 HP agit. (4)
5,000 gal. 304SS, atm. int., 75 psi jkt., agit.
4,100 gal. 304SS kettle, 16 psi jkt., 5 HP agit.
3,500 gal. 316SS kettle, 20 psi jkt., 7½ HP agit. (2)
2,500 gal. 304SS reactor, 75 psi/FV int., 180 psi jkt.
1,500 gal. 304SS kettles, jktd., 5 HP agit. (3)
1,500 gal. Pfaudler 316L SS reactor, FV/180 psi, 5 HP Agit. (2)
1,150 gal. 304SS reactor, 15 psi int., 25 psi jkt., 5 HP agit.
900 gal. 304SS reactor, 75 psi/FV int., 150 psi jkt., agit.
600 gal. 304SS reactor, 300 psi int., 75 psi jkt., coils (3)
500 gal. 304SS reactor, 150 psi int., 150 psi jkt., 5 HP agit.
300 gal. 316SS reactor, 75 psi/FV int., 60 psi jkt.
(50)... 316SS and 304SS reactors and kettles from 5 gallon to 400 gallon... call for list.

BIG PFAUDLER 316SS REACTORS

(3) 15,000 gal. Pfaudler, 316SS, 12'6"x 15', 100 psi, 200 psi jkt. Agit.
(4) 10,000 gal. Pfaudler, 316SS, 11'6"x 12'4", 100 psi, 180 psi, jkt. Agit.

REACTORS-GLASS

2 gal. Pfaudler, 750 psi/FV, 700 psi jkt.
20 gal. Pfaudler, 35 psi, 100 psi jkt., agit. (2)
30 gal. Pfaudler, jktd.
50 gal. Pfaudler, 25 psi, 100 psi jkt.
50 gal. Pfaudler, 100 psi/vac., 85 psi jkt., agit., 1975
100 gal. Pfaudler, 25 psi, 90 psi jkt., agit.
150 gal. Pfaudler, 25 psi/vac., 90 psi jkt., agit.
300 gal. Glascote, 25 psi/vac., 90 psi jkt.
500 gal. Pfaudler, 100 psi/vac., 90 psi jkt., vari-drive agit.
600 gal. DeDietrich, 65 psi/vac., 105 psi jkt., 5 HP agit.
750 gal. Pfaudler, 25 psi, 85 psi jkt., 5 TW agit.
1,000 gal. Pfaudler, 100 psi, 90 psi jkt.
1,000 gal. Pfaudler, 75 psi/vac., 90 psi jkt., 10 HP agit.
1,500 gal. DeDietrich, 100 psi/vac., 90 psi jkt., 1981.
1,500 gal. Pfaudler, 100 psi/vac., 90 psi jkt., 25 HP agit.
2,000 gal. Pfaudler, 100 psi/vac., 90 psi jkt., 15 HP agit.
2,500 gal. Pfaudler, 150 psi, 90 psi jkt., #TW6 agit.

NEW LIQUIDATION! CHEMICAL/POLYMER PLANT....ILLINOIS ..BUY BEFORE REMOVAL AND SAVE!!

Bird 32"x 50", centrifuges, 316SS, contour (2)
Welex 8" Extruder, 700 HP, 30:1 L/D (5)
Welex 6" Extruder, 400 HP, 30:1 L/D (2)
Conair 24" pelletizer, 40 HP (2)
Renneberg 5'x 25' 304 SS rot. hot air dryers, 10 HP, (3)
Sweco & Kason 60" screens, SS (2)
K-Tron 7000#/hr. twin screw volumetric feeder, SS, (5)
Pfaudler 1,500 gal. 316L SS reactor, FV/-180 psi' 5 HP agit. (2)
Pfaudler 10,000 gal. 316L SS reactor, 150 psi/FV int., 180 psi jkt., hyd agit (4)
Worth. Plant air comp., 323 CFM @ 125 psi, 75 HP, Model #4-BB-2 (2)
17,000 gal. & 12,000 gal. 316 SS Tanks (3)

PHONE (609) 267-1600

DRYERS

Blaw-Knox 8'4"x 40' SS vac. dryer, 600 cu. ft.
Blaw Knox 36"x 20' vac. dryer 316L SS, 72 cu. ft.
Blaw Knox 66"x 36' vac. dryer, nickel
Mathis 24"x48" flaker, chrome plated
Sandvik 48"x24' SS belt flaker, UNUSED
Sargent 60" x 45' SS conveyor dryer
Stokes 8" x 11" drum flaker
Blaw Knox 32" x 90" dbl. drum
Buflovak 42" x 120" dbl. drum, 160 psi
Aeromatic #ST-5 fluid bed dryer, 5/10 KG
Witte 36" x 10' fluid bed, SS, sanit.-cooler
Stokes 36 sq. ft. Lyophilizer freeze-dryer
Renneberg 36" x 20" rotary dryer, 316 SS
Renneberg 5'x 28' 304SS rot. hot air dryers, w/cyclone, etc. (2)
96" x 50' Louisville SS rotary dryer
10' x 100' GATX rot. steam tube dryers, 140 psi (4)
Wyssmont #VTL-24 Turbo-tray dryer, 304SS
P-K 5 cu. ft. vac. dryer, 304SS
P-K 20 cu. ft. vac. dryer, 304L SS (2)
Abbe 30 cu. ft. 304SS vac. dryer
Devine 110 cu. ft. 304 SS vac. dryer
Pfaudler 165 cu. ft. glass-steel vac. dryers (2)
Abbe 325 cu. ft. 316SS vac. dryer
Devine 370 cu. ft. 316SS vac. dryer
Devine 564 sq. ft. vac. shelf dryer
Niro 30" SS spray dryer
Turbulaire 48" x 7' spray dryer
Bowen 72" spray dryer, SS
Bowen 96" spray dryer, SS

FILTERS-VACUUM

36" x 1' Dorr-Oliver, fiber glass 9 sq. ft.
36" x 1' Ametek, 316 SS, 9 sq. ft.
40" x 3' Bird-Young, SS, 48 sq. ft.
4' x 16' Elmco, 316SS, 64 sq. ft., horiz.
6' x 3' Ametek, SS, 55 sq. ft.
6' x 4' Elmco, "Elmcomat" polypropylene, UNUSED
8' x 8' Elmco, SS, 200 sq. ft., precoat
8' x 10' Dorr-Oliver, 250 sq. ft., 316SS, precoat
8' x 12' Elmco, 316SS, precoat, 300 sq. ft., (3)
8' x 14' Dorr-Oliver, 316SS, precoat, 350 sq. ft. (2)
10' x 10' Elmco, 316SS, precoat, 314 sq. ft.
11'6"x 16' Elmco, SS contacts
12' x 14' Komline, 304SS, 525 sq. ft., flexibelt disch. (2)
45' dia. Elmco tilting pan. vac. filter, 316 SS

Dorr-Oliver 8' x 12' precoat rotary vacuum filters, 316SS contacts...Prices Slashed, BIG SAVINGS!

FILTERS-PRESSURE

12 sq. ft. Amatek/Niagara #12, SS
54 sq. ft. Funda, SS, jktd.
65 sq. ft. Artisan "Dynamic" filter/washer, SS (2)
140 sq. ft. Niagara # 36-140 316 SS (2)
600 sq. ft. U.S. Autojet, 316SS, sanit.
1000 sq. ft. U.S. Autojet #1000, 304SS
30" Sperry filter press, 11 cu. ft.
36" Shriver filter press, 546 sq. ft., hydraulic
42" Shriver filter press, 777 sq. ft., hydraulic
48" Shriver ALP recessed filter press, SS, 276 sq. ft.
48" Clow, polypropylene recessed, 1500 sq. ft.

PULVERIZERS

Mikro #5MA atomizer, 5 HP
Mikro #6MA atomizer, SS
Mikro #2DH pulv., SS, 5 HP
Pallman #REF8 pulv., 100 HP
Pallman #PP8 pulv., 50/75 HP
Abbe porcelain pebble mills... 36"x42", 36"x48", 42"x60", 48"x60", 60"x48" (7)
Raymond 50" 5-roller hi-side mill, 1981, UNUSED
Raymond #6058 Hi-side roller mills, dbl. whizzer (2)
Raymond #73612 Hi-side roller mill, dbl. whizzer

NEW LIQUIDATION DRY DETERGENT MFG. EQUIP. ...NORTH JERSEY!

5-Kleissler dust collectors: 2000, 1400, 535 sq. ft.
5-Cleveland 120 cu. ft ribbon blenders, 60 HP
5-60' C/C steel bucket elevators
5-Kleissler bag type dust collectors
2-Box Filling Lines/ 180, 120 Boxes/Min.
1-J.H.Day 200 gal. sigma blade mixer, jktd., 40 HP
2-Moyno Pump # ILSSSO, 5HP.
2-FMC-Stokes form, fill & seal units
2-Eriez #628 vibratory feeder, SS, 60"x 18"x 24" UNUSED
1-Hesser volumetric powder carton filler.
2-Standard-Knapp case gluers
1-Hercules drum mixer
1-200 gal. SS tank, jkt. & agit.

Over (50) Bird & Sharples decanters

CENTRIFUGES

Sharples P-5400D-Canter, 316SS, Carbide tiles, late (2)
Sharples P-3400 D-canter, 316SS, tiles (2)
Sharples P-5000 D-canter, 316SS
Sharples P-660 D-canter, 316SS, back drive
Bird 12" x 30", 316SS, Decanter, 20 HP
Bird 18" x 28", 316SS, Decanter (3)
Bird 18" x 42" Decanter, steel, 10/30
Bird 24" x 38" Decanter, 304SS, contour-10
Bird 24" x 38" Decanter, 316SS, contour (3)
Bird 24" x 60" Decanter, steel
Bird 24" x 86" Decanter, SS, 125 HP
Bird 24"x 96" decanter, 304SS, carbide tiles, 1981, UNUSED (3)
Bird 32" x 50" Decanter, Monel, contour (2)
Bird 32" x 50" Decanter, 304SS, contour
DeLaval NX214-31B Decanter, 304SS, 20 HP (2)
Sharples AS16V "Super," SS (5)
Sharples AS26V "Super," SS
DeLaval BRPX-213-30, 316SS separator/desludgers (3)
Westfalia SAMN15037, Desludger/Separator, 316SS
Westfalia SA14-35-076 3-way separator, 316SS
Krupp 10" pusher, 316SS, 15 HP
Baker-Perkins 19" pusher, 304SS, 40 HP
Sharples 48" T-1600 auto-basket, 100 HP
Tolhurst 48" Batchmaster, rubber lined, 30 HP
Sharples 48" Tornado-Matic, SS, 25 HP
Delaval 48" Mark 111, 316SS hyd.
CENTRIFUGE PARTS... Sharples, Bird, DeLaval, etc.

EVAPORATORS

2.4 sq. ft. Rodney-Hunt SS, 3 HP
21 sq. ft. Rodney-Hunt Turbafilm #4, SS
87 sq. ft. Rodney-Hunt, 304 SS, Turbafilm
100 sq. ft. Pfaudler, 316L SS, wiped film
600 sq. ft. Goslin-Birmingham dbl. effect, SS
854 sq. ft. Buflovak dbl. effect, SS
1688 sq. ft. Roger dbl. effect, SS
Swenson 316SS cntinuous crystallizer, 9" x 14'

TANKS & VESSELS

30,000 gal., 304SS, 14' x 24', coils, 200 HP agit. (4)
20,000 gal., 304SS, 12' x 24' (2)
17,000 gal., 304SS, 11' x 24' (3
17,000 gal., 316LSS, 14'x 13', Agit. (2)
12,000 gal., 316LSS, 12'x 14', Agit. (5)
10,500 gal., 316L SS, 8' x 25'
10,400 gal., 304SS, 10'6" x 16', agit.
8,000 gal., 304SS, 10'6" x 12'
5,000 gal., 304SS, 9'x9', 25 HP agit.
3,500 gal., 304SS, 8'x9'
3,000 gal., 304SS, 7'x 10', agit.

MIXERS, BLENDERS

3.5 cu. ft. Henschel #FM15D, 17/20 KW
11.5 cu. ft. Henschel #115JSS, 92/46 HP
13.7 cu. ft. Lodige #W600/K1200, mix/cool comb.
16 cu. ft. Strong-Scott 304SS ribbon blender (3)
20 cu. ft. P-K twin shell SS
35 cu. ft. Day Nauta, #NBX350, SS
60 cu. ft. Gemco ,TW SH, Sanit, SS
69 cu. ft. Patterson dbl. cone, SS
70 cu. ft. Day Nauta, #NB700, 10 HP
75 cu. ft. Day Nauta, SS, jktd.
75 cu. ft. Robinson SS ribbon blender, jktd. (2)
98 cu. ft. Day Nauta, SS, 1981
110 cu. ft. J.H. Day, dbl. ribbon, 316SS
120 cu. ft. Cleveland ribbon blenders (5)
144 cu. ft. 304SS dbl. ribbon blender, 30 HP
189 cu. ft. Pfaudler, dbl. cone, glass steel jktd., vacuum
200 cu. ft. Young, ribbon, SS
316 cu. ft. Sprout-Waldron ribbon blender, SS, jktd.

(2) Sharples P3400 D-Canter, 316SS, back drive, little used since rebuilding!

LIQUIDATION

NEW & UNUSED PROCESS EQUIP., 1982, IN ORIGINAL PACKING ... SOUTH CAROLINA, CALL! Phone (609) 267-1600

BALERS, Dispozapak #D600 balers, (2)
BAG PACKER, Howe-Richardson #G-S-17 semi-automatic bagging system SS contacts, heat sealed closer, etc.
BINS, 304L SS contacts, 1300 cu. ft./9720 gal., 11'6" x 11'6" x 18" high, steel reinforced (2)

CENTRIFUGE, Bird 24" x 96", 304SS, Model 1? solid bowl continuous, 10 deg. contour bowl Tungsten carbide tiles on conveyor, 150 HP 2900 RPM bowl speed (3)

CHLORINATION SYSTEM, Wallace & Tiernan #V800 floor mounted modular chlorinator
COLUMN, 46" dia. x 15'9", 304SS wash columns, designed for agitation (2)
CYCLONE, DuCon Model 700/175 304SS high efficiency cyclones, size 210, Type VM (8)

DRYERS, Nooter 4' x 14' rotary vac. dryer, 316L SS shell and jacket, incoloy ribbon agit. ASME 100 psi/FV int. & jacket. 100 HP packaged Reliance drive with freq. converter.

FEEDERS, Acrison gravimetric weigh feeds, Model 403-15,000-3,000-BDF-4, 304 SS contacts, Model BDF-4 volumetric feeder, Size "R" metering, auger and disc. cylinder, etc., etc... all SS contacts
FURNACE, C-E Air Co. "Cor-Pak" thermo oxydizers, direct gas fired 8'x2" W x 7'9" H x 12'6" L (4)
MIXER, Air mix blender system, Koppers-Sproul Waldron #36-50, 500 cu. ft., 304SS, 8' x 19'10" w/483 sq. ft. dust collector (2)
MIXERS, Webb, 59" W x 15'L twin shaft paddle mixers or pug mills, 304SS contacts, (2)
PACKAGING SYSTEM, design to fill bags, palletize, shrink wrap, etc. automated system.

PULVERIZERS, Mikro #4TH pulverizers, 125 HP drive, (15)
PULVERIZERS, Mikro #4MP pulverizers, 125 HP drive (5)

PULVERIZERS, Mikro #1SCB, 7½ HP, with airlock & 304SS disc. chute
PUMPS, Able #H18-57-45 triplex pump, 60 GPM @ 1500 psi, 50 HP
PUMPS, Peabody #14DOH-2 cooling tower pumps, 2000 GPM at 140' head, 100 HP
SHRINK WRAPPERS, CTX Prod. #PSBV4X48 shrink wraps with oven

PNEUMATIC TRANSFER BLOWER PACKAGES

(30) Roots "Whispair" positive blowers, packaged by Flo-Tronics, for pneu. transfer...150, 100, 50, 40, 25, 20, 10, 5 HP sizes...ALL NEW!

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RIETZ 6" Extructor
KEMWALL Powder Press
STOKES Mod 526 Single Station Dual Pressure Tablet Press
STOKES Mod. 338-D-6 Vacuum Dryer/Oven
AMF GLEN 340 Qt. Mixer
(1) **RESINA** U-30 and (2) U-40 Cappers
PMC 6-Station Automatic Cap Plugger
MATEER Bursa-fil S/S In-case Scale Filling System
CRANDALL Twin 5-Gal. S/S Scale Filler

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Tanks: 250-1600 Gal. storage & mixing, S/S & fiberglass
5000 Gal. 304 S/S storage tank, vertical, closed, dished hds.
(2) Richmond 3000 Gal. S/S Reactors, 60/40 PSI, 50 HP 2-Spd.
Richmond 3000 Gal. S/S Reactor, 60/40 PSI, 20 HP.
(3) Pfaudler 30 Gal. S/S Reactors, 60/90 PSI, 1½ HP XP V/S.
Hercules 600 Sq. Ft. "Roto-Jet" Filter, 316 S/S, 60 PSI.
Jacobson 8DSF-11 "Universal" Hammer Mill, 100 HP.
(2) Entoleter Type EIM "Centrimil", 48" Dia., 316 S/S, 150 HP.
Simpson "Rotex" model 861 Sifter, 316 S/S, single deck.
Fitzmill, 316 S/S, No. DKAS012, 20 HP.
Holo-Flite Screw Dryer, 16" Dia. x 20' L., C/S, Jkt. trough.
Chromalox 200 KW Hot Oil Unit.
Chromalox 20 KW Hot Oil Unit (ALL XP)
Sterling 12 KW Hot Oil Unit.
Hockmeyer 50/25 HP High Speed Disperser S/S, XP #2 Spd.
Cowles 50 HP V/S Disperser, XP, S/S, High-speed.
(3) Sussmeyer model 8RS Sand Mills, 30 HP XP.
Morehouse-Cowles 12-30 & 10-25 Sand Mills, 40 & 25 HP XP.
Patterson Steel Ball Mills, 6'x8' & 8'x5' and other sizes.
Abbe 4½x13' Continuous Steel Ball Mill, 60 HP.
Patterson & Abbe Ceramic-Lined Pebble Mills from 15"x21"+up.
Reliable 6"x12" Two Roll Mill, 5 HP.
35 Cu. Ft. C/S heavy-duty ribbon blender, 10 HP XP.
(2) Letsch S/S sanitary ribbon blenders, 12.25 Cu. Ft., 2 HP.
J.H. Day "Nauta" Blender, 21, Cu. Ft. 316 S/S. MBX
Votator: (2) 4"x46" L. Tubes, 316 S/S, 15 HP.
Dorr-Oliver "Web-Trol" 6'x8' Rot. Vac. Filter, 316 S/S.
Crandall 5-Gal. subsurface weigh-type filler, S/S, model F-2.
Turba-Film 1.13 Sq. Ft. Lab evaporator, 316 S/S, 1 HP complete.
Nichols/Niro 10 ft. Dia. Spray Dryer, 129 #/Hr., all S/S.
Baker-Perkins & Readco dbl. arm mixers; 2½ to 350 gal., C/S, S/S
Patterson-Kelly 5 cu. ft. V-Blender, S/S, 108 #/c.f.
Heat Exchanger 489 sq. ft., 304 S/S, 75/15 psi.

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PNEUMATIC SCALE 32-HEAD S/S FILLER W/PS 12-HEAD CAPPER-ALL ACCESSORIES
155 CU. FT. C/S HEAVY-DUTY DOUBLE RIBBON MIXER W/40 HP X-P MOTOR
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-Ross 10 gal. Planetary Mixer SS
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-Pfaudler 2.8 cu.ft. G/L dbl. cone vac. dryer
-Standard Hersey 4'x30' Rotary dryer SS
-Bowen Spray Dryers 7½' & 5' SS
-Aeromatic fluid bed S.S. dryer Model 100ST 20
-Patterson-Kelley 5 cu.ft. SS Conical Vac Dryer
-Stokes 5'x30' Rotary Vac Dryer, Jktd, SS
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-Hercules Filter 500 sq.ft. 316 SS
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-Strong Scott Rotary Vac Dryer, SS, 3x12 Solidaire
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TURMERIC FINGER Little Store 4 bgs (689 lbs) (Sea Land Develope) Rotterdam, 8/26.
ULTRAMARINE PIGMENT Elco Shpg 720 bgs (41,310 lbs) (Starfield) Felixstowe, 8/29.
Whittaker Clark & Daniels 720 bgs (41,310 lbs) (Sea Land Develope) Rotterdam, 8/26.
UREA & MELAMINE FORMALDEHYDE MOU 580 dms (53,909 lbs) (Zim California) Haifa, 8/29.
UREA FORMALDEHYDE MOULDING POWDER 820 bgs (45,194 lbs) (Zim California) Haifa, 8/29.
UREA MOULDING COMPOUND 41 pkg (45,194 lbs) (Zim California), Haifa, 8/29.
VALENCIA ORANGE OIL Herbert Marmorek & Sons 103 dms (44,478 lbs) (Zim California), Haifa, 8/29
VEGETABLE OIL Church & Dwight 1 dms (397 lbs) (Atlantic Concert) Liverpool, 9/1
WATTLE EXTRACT POWDER ME BRAND Tac Tannin & Chemicals 2,520 bgs (138,891 lbs) (American Ohio) Bremerhaven, 8/30.
WATTLE MIMOSA EXTRACT ME BRAND Tac Tannin & Chemicals 856 bgs (47,179 lbs) (American Ohio) Bremerhaven, 8/30.
WHITE PEPPER A Kansal 120 bgs (22,046 lbs) (Saudi Abha) Singapore, 9/4.
DMT 420 bgs (77,161 lbs) (Saudi Abha) Singapore, 9/4.
US Navigation 188 bgs (33,069 lbs) (Saudi Abha) Singapore, 9/4.
XYLENOL Alba Fwdg 200 dms (13,536 lbs) (Evor Goldon) Osaka, 8/26
YELLOW PHOSPHORUS Brandeis Instel 148 dms (78,374 lbs) (American Ohio) Bremerhaven, 8/30.
YERBA MATE Space Trdg 75 cs (5,247 lbs) (Rio Cincel) Buenos Aires, 8/26.
Status Imports 628 cs (17,328 lbs) (American Lancer) Buenos Aires, 8/28.
YUMICRON SEPARATOR FOAMING AGENC CH Powell 304 ctn (7,843 lbs) (Ever Going) Tokyo, 8/31
ZINC STEARATE Sattva Chemicals 420 bgs (12,500 lbs) (American Lancer) Buenos Aires, 8/28.

Acid Rain Bill: Compliance Costs Called Staggering

An economic analysis of an acid rain proposal currently pending before the Senate would cost electricity consumers between $10 billion and $15 billion per year in compliance costs over 20 years, according to an analysis by the Edison Electric Institute.

Thomas R. Kuhn, executive vice-president of the Edison Electric Institute, told members of the Senate Committee on Environment & Public Works Thursday that Congress has already put in place the necessary tools to address the concerns that have been expressed regarding acid rain. Kuhn said that EEI strongly opposes the enactment of the bill, which is also opposed by the Reagan Administration and US manufacturers.

EEI commissioned Temple, Barker and Sloane, Inc. (TBS), an economic consulting firm, to analyze the costs that would be incurred by electricity customers if the Senate bill were to be adopted.

According to the study, the annual costs of the "New Clean Air Act" will be nearly two to three times higher than even the most expensive measure now pending before the House of Representatives.

Ultimately, the compliance costs fall on the customers of the utilities affected. Consumers would face rate increases of 10 percent or more in 8 to 24 states, with the top statewide average at 17 to 20 percent, on a 20-year levelized basis, according to T. J. Glauthier, vice-president of TBS.

Mr. Kuhn questioned how solutions can be developed when the problem has yet to be defined. In light of the uncertainties surrounding the acid rain debate, he said it is "incomprehensible" that Congress would impose such a heavy economic burden upon electricity consumers. "As a nation, we need to focus on long-range, cost effective emission control," Mr. Kuhn added.

EMISSION REDUCTIONS

According to the TBS study, sulfur dioxide (SO2) emissions reductions of 12.3 to 13.1 million tons would cost $7.3 to $8.3 billion a year. Nitrogen oxide (NOx) emission reduction requirements are the least certain, depending upon EPA implementation, and could potentially be the most expensive, accounting for $3.5 to perhaps $7.1 billion annually.

The TBS compliance costs estimates for SO2 reductions are very similar to those projected by the Congressional Budget Office (CBO). CBO, which only analyzed the SO2 provisions, estimates that the net present value cost from 1986 through 2015 would be $93.6 billion. The TBS net present value estimate for the SO2 provisions ranges from $81 to $103 billion.

Mr. Kuhn expressed concern over the bill's impact on the development of new technologies to reduce emissions. According to TBS, the New Source Performance Standards (NSPS) provisions, standing alone, would encourage to some degre the development of advanced technologies which would make the estimated compliance costs in later years somewhat lower than they would be with present technologies.

However, the requirement beginning in 1992 that all plants must meet a 0.7 lbs mmBTU SO2 emission requirement after 20,000 hours of operation would restrict the technological development, according to the TBS report.

This provision would actually encourage the installation of older, more expensive and less efficient technology, prior to the time when more cost-effective advanced generating and pollution technology would be commercially available on a wide scale, Mr. Kuhn said.

CHEMICAL IMPORTS

Continued from Page 49

THIOACETIC ACID 20 dms (2,513 lbs) (Nedlloyd Express) Marseille, 8/18.
THIOUREA James E Fox 864 bgs (43,486 lbs) (Ever Garden) Hamburg, 8/27.
TITANIUM DIOXIDE Dorsett & Jackson 4,400 bgs (220,683 lbs) (Sea Land Adventur) Algeciras, 8/27.
Kemira 1,080 bgs (75,764 lbs) (Tadeusz Kosciuszk) Bremerhaven, 8/26.
Luckens Chemical 1,600 bgs (83,004 lbs) (American Ohio) Rotterdam, 8/30.
NL Ind 7,200 bgs (371,431 lbs) (Starfield) Antwerp, 8/29.
3,200 bgs (165,080 lbs) (Nedlloyd Rosario) Antwerp, 8/31.
Rhone Poulenc 2,400 bgs (125,530 lbs) (Nedlloyd Rosario) Antwerp, 8/31.
Sacco Pigments & Solvents 3,200 bgs (166,008 lbs) (American Ohio) Rotterdam, 8/30.
Huxley Raw Material 760 bgs (39,590 lbs) (Stefan Starzynski) Bremerhaven, 9/2.
Huxley Raw Material 760 bgs (39,590 lbs) (Stefan Starzynski) bremerhaven, 9/2.
NL Ind 336 pli (204,940 lbs) (Atlantic Concert) Gothenburg, 9/1.
NL Ind 9,600 bgs (496,300 lbs) (Ever Garden) Antwerp, 8/27.
WP Cronin 4,500 bgs (231,152 lbs) (Tadeusz Kosciuszki) Rotterdam, 8/26.
Nissho Iwai American 8 ca (55,382 lbs) (Kurobe Maru) Kobe, 8/26.
NL Ind 6,400 bgs (330,869 lbs) (American Ohio) Rotterdam, 8/30.
TRICHLORO ISOCYANURIC ACID GRANU 375 dms (118,222 lbs) (Ever Golden) Osaka, 8/26.
TRICHLOROETHYLENE Rema Tech 48 mlx (25,093 lbs) (Tadeusz Kosciuszk) Bremerhaven, 8/26.
Remaco 148 mix (34,343 lbs) (Tadeusz Kosciuszk) Bremerhaven, 8/26.
TRIBODIUM PHOSPHATE Browning Chemical 400 bgs (40,441 lbs) (Kaldas) Chioggia, 8/26.
ICD Group 400 bgs (40,441 lbs) (Kaldas) Chioggia, 8/26.

COATINGS & PLASTICS

Continued from Page 39

Chemical Company and Ciba-Geigy Corporation, the second and third largest domestic producers of commodity epoxy resins, in September.

Discounting and imports had led to considerable price erosion in this market. Producers say that discounts are gradually lessening, while import levels have fallen sharply since June.

PHENOLIC RESINS — In response to increases in phenol costs, Borden Chemical Company will increase prices for various grades of phenolic resins, effective October 15.

The firm's Industrial Phenolics Division and Acme Resin Corp. subsidiary will increase liquid resin prices by 1c. to 4c. per pound, and flake and powdered resin prices by 2c. to 4c. per pound. Increases will depend on grade. As of last week, individual costs for specific grades had not yet been established.

Effective the same date, Borden's Resins & Chemicals Division will implement 0.5c. per pound increases in prices for its liquid commodity phenolic resin lines.

Demand for the powdered phenolics used in plywood production has been very high this year, reflecting vigorous construction. Producers describe current powdered capacity and production as being at "record levels."

Demand for foundry and other industrial grades, however, has been falling steadily since the late 1970's, reflecting the state of the US steel and automotive industries. Prices for both industrial and construction grades eroded by 10 to 15 percent earlier this year, due to depressed phenol costs.

Aside from Georgia-Pacific's Michigan expansion, no other construction grade phenolic resin capacity expansions have been announced for this year. Capacity for industrial grades is also said to remain unchanged since last year.

Borden Chemical Company acquired the Acme Resin Division of CPC International Inc. on June 30th; it is now operating as a subsidiary of its Industrial Phenolics Division, specializing in foundry applications.

Other phenolic resin producers have not yet decided whether to follow Borden's move — they say they are waiting to see whether the phenol price increase is fully successful before making any definite price change.

Producers complain of eroded prices and margins, despite strong demand in construction related segments, and add that operating, insurance and environmental compliance costs have increased significantly in the past year, contributing to some pressure to increase prices for these resins.

POLYETHYLENE — Last week's thermoplastics bulk selling price box for September 1986 contained two misprints: selling prices for low-density liner grade and high-density injection grade polyethylene (LDPE and HDPE), listed as 29c. per pound and 28c. per pound, respectively, should have read 25 to 27c. per pound and 24 to 26c. per pound.

Producers report that 95 percent of large volume LDPE orders were priced in the 25c. per pound to 27c. per pound range. They noted a firming trend in both HDPE and LDPE prices this September, and are optimistic that August and October price increases will hold, given current market conditions.

POLYESTER RESINS — The Resins & Coatings Division of Owens-Corning Fiberglass Corporation increased sublist prices for its general purpose unsaturated polyester resins lines by 2c. per pound, effective October 1. The company raised prices for shrink-control grades by 5c. per pound on the same date. Ashland Chemical Company has announced an October 15 price increase of 2c. per pound for general purpose grades.

These moves follow similar price increases announced by the Chemicals Division of USX Corporation and Reichhold Chemicals Inc. in late September, effective October 1.

Prices for these resins had eroded by 10 to 12 percent during the first half of the year, in response to depressed crude oil prices and customer pricing pressure. Flat growth is expected for the market this year.

POLYPHENYLENE SULFIDE — Phillips 66 Company, the sole domestic producer of this plastic, reduced prices for its "Ryton R-7" polyphenylene sulfide by 31 percent on October 1, bringing prices down to $1.45 per pound (less than 10c. per cubic inch) from $2.12 per pound for truckload quantities.

The company hopes that this will enable the polymer to compete with flame-resistant grades of PBT and PET resins in automotive and electronic applications.

"Ryton R-7," a glass fiber reinforced, mineral filled compound, is inherently flame resistant, unlike polyester resins, which require additives. It has a heat deflection temperature of 500 degrees F and a UL temperature index of 220/200 degrees C.

Applications for the polymer, described by the firm as "the most versatile" of its "Ryton" line, had been limited by its high price. While a spokesman for Phillips concedes that the high cost of changing tooling technology will prevent any large scale takeover of markets now dominated by PET, PBT and glass-filled phenolics, "Ryton R-7" 's superior dielectric, tensile and insulating properties may make it a more viable candidate than other thermoplastics for use in specific electronic, automotive and consumer appliance markets.

Once the polymer establishes itself, a spokesman for the firm feels that it will grow at a more dramatic rate than the overall PPS market, which has shown between 15 and 20 percent annual growth for the past five years.

Phillips 66, which began marketing PPS technology in Western Europe and Japan in 1983, expects to complete a 3-million-pound-per-year expansion at its Borger, Tex. plant by December of this year, bringing annual US capacity of neat (as opposed to composite) polymer to 16 million pounds. Composite capacity should total 26 million pounds. By the end of 1987, the company will form a joint venture in Japan with Toray Industries, which is expected to add another 16.5 million pounds of PPS capacity to the current worldwide figure.

In 1985, US demand for PPS totalled 11 million pounds (for neat polymer) or 17.6 million pounds of compounded material. This year, the market is expected to show 12 percent growth.

Neat production capacity last year totalled 12 million pounds, or 20 million pounds of compound product.

Petroleum Price Ratios Held To Be Steady

The historic differences between various product prices have remained as stable through the 1986 crude oil price collapse as they have for the last two decades, says Turner, Mason & Company, a Dallas consulting firm.

The firm says that product price differentials seem to vary with the price of No. 2 fuel oil — not the price of crude oil. The importance of the No. 2 fuel oil price emerged from Turner, Mason's recent study of crude and product wholesale price relationships on the US Gulf during the last 20 years.

"It's a myth that price differentials between petroleum products are directly related to the price of crude oil," says George Michalski, who conducted the Turner, Mason study.

"Absolute spreads have remained remarkably constant despite a 10-fold range of crude oil prices over the last 20 years. So no matter how volatile future crude oil prices are, whether they are $10/barrel, $20/barrel, or $30/barrel, refiners can use these new understandings of the relationship between the prices of various refinery products (and the relationship between crude oil and No. 2 fuel oil prices) in their profit planning for future refinery operations."

No. 2 fuel oil is a distillate range product, meaning it is heavier than the lightest petroleum products such as LPG and gasoline and lighter than the heaviest petroleum products like residual fuel and asphalt. Once the key No. 2 fuel oil/crude oil price relationship is established, prices of other products can be estimated by using simple price relationships with No. 2 fuel oil.

"Historically, No. 2 fuel oil has sold for about 8 percent more than crude oil," says Mr. Michalski.

"Back in the mid-1960's to the late 1960's, No. 2 fuel oil premium was just about 8 percent when crude oil was delivered to the U.S. Gulf Coast at an average $3.36 per barrel.

"Even during the unusual times such as the 1984 English coal strike, the 8 percent premium over crude varied up or down by a mere three percentage points. And earlier this year the 8 percent premium of No. 2 fuel oil over crude oil was still maintained — provided proper allowance is made for crude oil delivery time and refinery storage time," Mr. Michalski says.

Kerosene/Jet A fuel, the type of fuel used by commercial jets, has been 3 cents to 4 cents per gallon over the price of No. 2 fuel oil (see table). This puts the price of this product in the neighborhood of regular gasoline and reflects the strong and growing demand for Jet A relative to the amount of kerosene that occurs naturally in crude oil.

"Turner, Mason expects this product to command at least 3 cents a gallon more than No. 2 fuel oil, even with crude oil at $15/barrel," says Mr. Michalski.

Residual fuel prices are related to No. 2 fuel oil in a different way. Except during the English coal strike, the price of No. 6 fuel with 0.7 percent sulfur has averaged 0.77 times the price of No. 2 fuel while crude oil was in the $28-$37 a barrel range. It remains at the 0.77 level even with crude oil prices averaging below $14 per barrel for the past six months.

UNLEADED GASOLINE PRICES

Another heavy product Bunker C fuel with a sulfur content of 3 percent or more, has averaged 0.68 of the price of No. 2 fuel oil.

For the past five years, unleaded regular gasoline has averaged 3.5 cents/gallon over No. 2 fuel oil.

"Turner, Mason estimates that the differential would have been nearly as high if this grade of gasoline had been produced in the late sixties," Michalski says. "This is based on leaded gasoline prices less the cost of lead antiknock. With crude oil at $15/barrel, Turner, Mason expects future unleaded regular gasoline to be priced 3 cents to 3.5 cents/gallon over No. 2 fuel oil."

Premium unleaded gasoline prices have averaged about 4 cents a gallon over unleaded regular since its volume became large enough to be recognized by the major price services. This spring the differential got as high as 7 cents per gallon as refiners anticipated sharply increased octane costs due to increased gasoline demand and increased pool octane.

"Turner, Mason expects the premium-regular differential to oscillate in the 4 cents-6 cents/gallon range for the next couple of years if crude oil costs remain around $15/barrel, Michalski says.

This differential is equivalent to 1 cent to 1.5 cents per octane number per gallon, well above the 0.5 cents per octane number per gallon in unleaded regular. These figures demonstrate the sharply increased cost of incremental octane numbers above regular grades.

GASOLINE PRICE DIFFERENTIALS

Before this year, the differential between leaded regular and unleaded regular gasolines has remained a steady 2 cents to 2.3 cents per gallon. However, this relationship must be re-evaluated in the light of the 0.1 gram of lead per gallon limit imposed by the Environmental Protection Agency as of Jan. 1, 1986.

The price differential between these two gasoline grades is dependent on the refinery cost of increasing octane number. The drop in crude oil prices this year cut incremental octane costs by catalytic reforming to less than 0.5 cents per octane number per gallon in the regular gasoline octane range.

"The situation is muddied by EPA rules that permit refiners to use more than 0.1 gram per gallon of lead in gasoline under certain circumstances. When the dust settles, Turner, Mason expects leaded regular gasoline to bring in 0.5 cents a gallon more at wholesale than unleaded regular gasoline," says Michalski. "This pattern already prevails in Gulf Coast markets and differentials are trending in this direction in other parts of the country."

Price relationships represent "equilibrium free market" prices prevailing over a reasonable time and cannot be used to predict daily spot prices. They can temporarily be disrupted by events that significantly affect the world energy balance.

For example, during the British coal strike of 1984 there was a sharp increase in demand for distillate and residual fuels.

ADVERTISERS' INDEX

CHEMICAL PROFILE

ADIPIC ACID

OCTOBER 6, 1986

SUPPLY

PRODUCER	CAPACITY*
Allied, Hopewell, Va.	30
Du Pont, Orange, Tex.	350
Du Pont, Victoria, Tex.	700
Monsanto, Pensacola, Fla.	600
Total	1,680

*Millions of pounds annually. All producers, except Allied use cyclohexane feedstock and have captive requirements for nylon 66 manufacture. Allied uses phenol as a feedstock and sells its adipic acid on the merchant market. Profile last published 10/17/83; this revision, 10/6/86.

DEMAND

1985: 1.5 billion pounds; **1986:** 1.68 billion pounds; **1987:** 1.66 billion pounds.

GROWTH

Historical (1974-1986): Zero percent per year; **future:** 2 percent per year through 1990. (Adipic demand is highly cyclical. This year will see growth of 12 percent over last year. But moderate contraction in the years following will combine for an average five-year growth of 2 percent per year.)

PRICE

Historical (1952-1986): High, 57c. per pound, bulk, f.o.b., frt. equald.; low, 18c. per pound same basis. **Current:** 50c. to 53c. per pound, same basis.

USES

Total nylon 66, 87 percent (reactant for nylon 66 fibers, 77 percent; reactant for nylon 66 resins, 10 percent); polyurethane resins, 4 percent; plasticizers, 3 percent; miscellaneous including food and polyester resin uses, 2 percent; exports, 3 percent.

STRENGTH

Strong housing and automotive markets this year have boosted demand for nylon 66 by up to 15 percent. A weaker US dollar has enhanced trade opportunities in the Far East. Demand for the product there is expected to be up by 10 percent this year.

WEAKNESS

Adipic acid consumption is tied to highly cyclical sectors of the economy. Strong growth this year and next will be replaced by contraction in the following years. The price of adipic acid has fallen about 2 to 3 cents per pound on the merchant market in the last year in response to lower feedstock costs.

OUTLOOK

Adipic acid supplies will remain more than adequate through 1990. The current boom in nylon 66 demand should taper off by the end of 1987. The next strong upturn in demand is not expected until after 1990.

PLATFORM

The Trade Arena

The following remarks are excerpted from an address by W.H. Clive Simmonds, formerly of the National Research Council of Canada, before a joint meeting of Chemical Marketing Research Association and the chemical marketing and economics division of American Chemical 1 Society in Newport Beach, Calif.

Chemical manufacturers and users in North America are being subjected to legal suits claiming very substantial damages through jury trials. This kind of legal action is either very rare or much less successful in Japan, but Japan is vulnerable in another way — their dependence on imports for their new materials, energy and a significant proportion of their food.

In either case, North American or Japanese, an ignorant or antagonistic public spells trouble if it can effectively hold back desirable scientific and technological advances. We can no longer leave support of science and technology by the public to accident.

The Japanese correctly place the responsibility where it belongs — on scientists and technologists and on the industry and governments which employ them. The Tsukuba Expo 85 Science Exhibition was held, among other things, to encourage the public, and in particular its younger members, to become more interested and knowledgeable in science and technology.

The emergence of the new, low cost, science and technology museums in the United States, such as the one of the waterfront at San Francisco, is another excellent sign of what is possible and what is being done.

The bottom line is surely twofold: firstly, that chemicals of all kinds will be easier to market the more the public understands and approves of them; and secondly, that the public needs more chemistry and better chemicals to improve its health and its quality of life. Can you sell one of these without selling the other? This leads to the trade situation across the Pacific.

The Marshall Plan of the United States after World War II showed how world prosperity could be greatly assisted by setting the terms of trade appropriately. The question today is whether it is possible to devise terms of trade under the present economic conditions which will create what Lee Iacocca calls a "win-win" for each participating nation.

The key lies in the resolution of the United States-Japan trade problems. The outcome of this struggle will determine whether the free world will enter a period of gradually expanding economic activity or one which will decline.

The difficulties are compounded by the almost diametric opposites of the cultures involved, and the widely differing attitudes to which they give rise. If you are visiting Japan, for example, and something happens which you do not understand, you will interpret it in normal North American fashion. However, it may be wise to consider that the situation may be the diametric opposite of what you expect.

When negotiating, for another example, North Americans tend to go by what is said. However, Japanese persons understand each other perfectly well by what is not said, and can reach agreement amongst themselves from the silences in the discussion. This is difficult for most Westerners to adjust to. The problem is to accommodate possible cultural misunderstandings in addition to the economic and technological factors.

One area of concern is the tendency of governments to try to control negotiations for political reasons. Obviously both governments and industries want to define the areas for negotiation, but if this process becomes too detailed, success may be imperilled. Can we increase the chances of success despite this likelihood? Yes, if we can devise means to get the problems to define themselves.

Suppose a Canadian negotiator wishes to increase meat exports to Japan. He immediately runs into a quota system, propped-up meat prices, and an exclusive importer, the Livestock Promotion Corporation. He knows about these, but is he aware of all the implications and complications of the effects of changing this arrangement inside Japan?

There is a way in which he could find out, by describing the Japanese situation back to his colleagues. By doing this, he will discover the points which he does not know or is uncertain about. His Japanese opposite number can act as a consultant in this process (It is presumably in Japanese interests for foreigners to be much better informed about the realities of their system). It is quite possible that the real problems are political and require a quite different approach if any real change is to be made.

Conversely, if a Japanese negotiator is dealing with exports of fish from Canada, there are many factors to be taken into account — quality and freshness, the 200 mile limit, actions by other countries which affect Japan's ability to fish itself, problems in the Maritime provinces, etc. By adopting the same method of explaining the Canadian position to his colleagues, he can acquire a fuller understanding of the situation from the Canadian point of view. In both cases the chances of successful negotiation have been raised by introducing a small measure of cooperation.

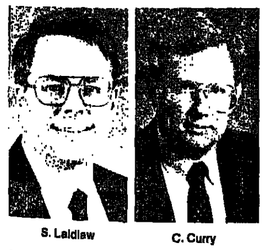
The agricultural situation is deteriorating to the point where efficient producers are being put out of business by continuing subsidization of less efficient producers because no one can solve the political problems involved.

JOBS & PEOPLE

Robert B. McDonald, who has been elected vice-president of engineering and special products at Great Lakes Chemical Corporation. He was previously vice-president of engineering.

SCOTT R. LAIDLAW has been appointed project development manager of American Ref-Fuel, a joint undertaking of Browning-Ferris, Inc. and Air Products & Chemicals Inc... **CHARLES A. CURRY** has been named director of business development for Horizon Chemical, a division A.E. Staley Manufacturing Company... **JOHN W. ESCHENLOHR** has been elected executive vice-president of Degussa Corporation's metal group and president of Degussa's recently acquired Metz Metallurgical Corporation.

MORT J. SPIEGEL has been named director of sales and marketing for Troy Chemical Corporation, Newark, N.J... **JOHN W. MOONEY** has been appointed market development manager of specialty polymers in the Resins Division of National Starch & Chemical Corporation... **CHRIS CORBETT** has been named a sales representative in the Louisville, Ky. division of Chemcentral Corporation.



S. Laidlaw C. Curry

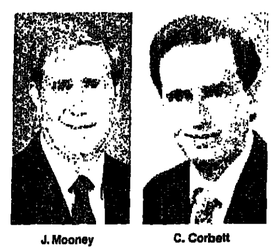
N. Diciani R.B. Ructor

J. Eschenlohr M. Spiegel

ROBERT LINDEMANN has been appointed president and general manager of Specialty-Chem Products Corporation, a wholly-owned subsidiary of ChemDesign Corporation... **TERENCE S. ARNOLD** has been named international marketing specialist for the Chemicals Division of Eastman Chemical Products, Inc.

DR. ANN HALVERSON has been named project manager of intermediates and fine chemicals at the Chemicals Division of BASF Corporation... **WALTER E. MORGAN** has been appointed general manager of Perkin-Elmer Corporation's instrument group and senior vice-president of the Corporation... **MICHAEL W. CRAWFORD** has been elected director of sales at Analytichem International, Harbor City, Calif.

MELVIN EBELING has been appointed to the newly established position of vice-president of marketing and sales at Senetek, Inc... **ROY HERBST** has been named account executive on the sales staff at Florasynth, Inc... **SALVATORE G. PASTORE** has been named vice-president of National Distillers & Chemical Corporation and general manager of Suburban Propane.



J. Mooney C. Corbett

JAMES C. MCCREARY has been named controller of Mobay Chemical Corporation's Inorganic Chemicals Division, **DENNIS B. BROWN** has been appointed controller of the company's Plastics & Rubber Division and **DAVID C. WITHERS** has been named controller of Mobay's Dyes, Pigments & Organics Division.

Air Products Names Manager, Director

Air Products and Chemicals Inc. has appointed Dr. Nance K. Dicciani manager of its Gardner cryogenics department and R. Bruce Ructor director of its international chemicals group.

Dr. Dicciani will be responsible for providing overall management direction to the engineering, manufacturing and sale of cryogenic containers on a worldwide basis.

Mr. Ructor will be responsible for strengthening the international presence of Air Products in the urethane and polymer markets.

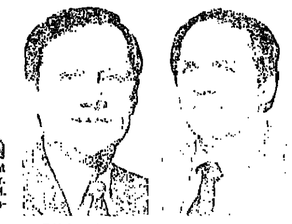
T. Daniel Clark, who has been named president of the Mogul Division of Dexter Corporation. Mr. Clark was most recently at the Seabrook, N.H. plant, where he was general manager of industrial products.

Pennwalt Appoints Two Organics Managers

Pennwalt Corporation has appointed F.H. Lauchert manager of marketing and sales and Nick E. Moran product line marketing manager, both in the Organic Chemicals Division.

Mr. Lauchert was previously sales manager for the Lucidol Division of Pennwalt.

Mr. Moran most recently served as a sales representative for the organic chemicals division.



F.H. Lauchert N.E. Moran

R. Lindemann T. Arnold

MEETINGS CALENDAR

October 6, 1986

THIS WEEK

AMERICAN OIL CHEMISTS SOCIETY, second world conference on detergents, Montreux, Switzerland, October 5-10.

SOCIETY OF THE PLASTICS INDUSTRY, plastics show and conference — South, jointly with the Society of Plastics Engineers, Georgia World Congress Center, Atlanta, Ga., October 8-10.

OCTOBER

AMERICAN ASSOCIATION OF TEXTILE CHEMISTS & COLORISTS, international conference and exposition, Westin Peachtree Plaza Hotel, Atlanta, Ga., October 28-31.

AMERICAN MICROCHEMICAL SOCIETY, eastern analytical symposium, jointly with American Chemical Society and Society for Applied Spectroscopy, New York Hilton Hotel, New York, October 20-24.

ASSOCIATION OF THE NON-WOVEN FABRICS INDUSTRY, eighth international conference and exposition, Georgia World Congress Center, Atlanta, Ga., October 21-23.

CHEMICAL GROUP, NATIONAL ASSOCIATION OF PURCHASING MANAGEMENT, Fall Conference, Marriott Pavilion Hotel, St. Louis, Mo., October 21-23.

CHEMICAL SPECIALTIES MANUFACTURERS ASSOCIATION, seminar on aerosol technology, Ramada Hotel O'Hare, Rosemont, Ill., October 27-29.

COMMERCIAL DEVELOPMENT ASSOCIATION, impact of mergers and acquisitions on the future of technology-driven corporations, Hershey Hotel, Hershey, Pa., October 26-29.

DRUG, CHEMICAL & ALLIED TRADES ASSOCIATION, 96th annual meeting, The Breakers, Palm Beach, Fla., October 15-19.

EUROPEAN CHEMICAL MARKETING RESEARCH ASSOCIATION, 1986 conference, "The Chemical Industry Faces its Future," Swiss Eurotel, Antwerp, Belgium, October 13-15.

EUROPEAN PETROCHEMICAL ASSOCIATION, distribution meeting, Hotel Loews, Monte Carlo, Monaco, October 19-22.

FIRE RETARDANT CHEMICALS ASSOCIATION, Fall conference on proper processing and selection of flame retardants, Kiawah Island, S.C., October 19-22.

NATIONAL RENDERERS ASSOCIATION, 53rd annual convention, Ritz-Carlton Hotel, Naples, Fla., October 14-18.

SOCIETY OF CHEMICAL INDUSTRY, chemical industry medal dinner, Plaza Hotel, New York, October 15.

SOCIETY OF THE PLASTICS INDUSTRY, polyurethane division, 30th annual rigid polyurethane technical/marketing conference, Toronto, Ontario, Canada, October 15-17.

NOVEMBER

AMERICAN PETROLEUM INSTITUTE, annual meeting, San Francisco, Calif., November 9-11.

CHEMICAL MARKETING RESEARCH ASSOCIATION, business school, personal computers in the workplace, Scanticon Executive Conference Center, Princeton, N.J., November 6-7.

COSMETIC, TOILETRY & FRAGRANCE ASSOCIATION, 1986 scientific conference and exhibit, J.W. Marriott Hotel, Washington, D.C., November 2-6.

DRUG, CHEMICAL & ALLIED TRADES ASSOCIATION, Fall luncheon, Waldorf-Astoria Hotel, New York, November 19.

FERTILIZER ROUND TABLE, Sheraton Inner Harbor Hotel, Baltimore, Md., November 17-19.

FRAGRANCE MATERIALS ASSOCIATION OF THE UNITED STATES, 10th international congress of essential oils, fragrances and flavors, Omni Shoreham Hotel, headquarters hotel, Washington, D.C., November 16-20.

K-'86, 10th international trade fair for plastics and rubber, Dusseldorf, West Germany, November 6-13.

LATIN AMERICAN PETROCHEMICAL ASSOCIATION, sixth annual meeting, Rio Palace Hotel, Rio de Janeiro, Brazil, November 23-25.

NATIONAL PAINT & COATINGS ASSOCIATION, 68th annual meeting, Atlanta Hilton Hotel, Atlanta, Ga., November 3-5.

LATER ON

CHEM SHOW, 42nd exposition of the chemical industries, Jacob K. Javits Convention Center, New York, New York, December 7-10.

CHEMICAL SPECIALTIES MANUFACTURERS ASSOCIATION, 73rd annual meeting, Marriott's Harbor Beach Resort, Fort Lauderdale, Fla., December 7-11.

NATIONAL ASSOCIATION OF CHEMICAL DISTRIBUTORS, 15th annual meeting, Ritz-Carlton-Naples Hotel, Naples, Fla., December 2-6.

BUSINESS BRIEFS

BASF Corporation's Chemicals Division has published a new brochure summarizing articles published here and abroad on the use of vitamins in cosmetics. The 68-page brochure, "Vitamins in Cosmetics 1967-1985", updates an earlier publication by the company covering the period 1967-1983. A free copy of the brochure is available upon request from BASF's Parsippany, N.J., office.

Bio-Botanica Inc., a manufacturer and supplier of herbal extracts and other botanical products, has completed the acquisition of Botanical Extracts Inc., maker of flavors, pharmaceuticals and extracts. A new wing at Bio-Botanica's Hauppauge facility will house the Botanical Extracts operations.

Chemical Marketing Research Associates Inc., has formed CMAI Europe, with an office in London. Peter Manning has been named managing director of the new firm. CMAI Europe's studies on the European petrochemical industry willl be integrated with worldwide information developed by CMAI in Houston.

Monsanto Company has introduced "Ultragloss" high-gloss polyethylene containers. The high-density PE containers are made by Monsanto's proprietary extrusion process at plants in Deep River, Conn., and Logonier, Ind. The containers are designed for such products as shampoos, hair conditioners, skin lotions, liquid soaps, cosmetics, laxatives and car waxes. Monsanto says "Ultragloss' containers are less expensive than conventional high-gloss materials.

Nor-Am Chemical Company, Wilmington, Del., has been appointed Eastern US representative for phloroglucinol by Ishihara Corporation. Phloroglucinol (1,3,5-trihydroxybenzene) is an intermediate used by the pharmaceutical, dyeline printing, photographic and adhesive industries.

Reichhold Chemicals Inc. has introduced a new polyester resin for automotive sheet molding compound (SMC) applications. The new resin, called "Polylite" 31-601, rated 75 surface number versus 118 surface number for the control resin using a Budd Surface Analysis test, Reichhold says.

Shell Chemicals UK Limited plans to move its head office from London to Chester. About 200 staff from London and elsewhere will be involved in the move, which is expected to take place between late 1987 and early 1988. The move will mean closer integration with Shell's manufacturing centers at Stanlow and Carrington.

Synthetic Organic Chemical Manufacturers Association's board of governors has approved nine companies for membership in the trade association. The nine companies are: Albright & Wilson Inc., Milliken Chemical Division, Orient Chemical Corporation, Pressure Chemical Company, Ruetgers-Nease Chemical Company, Carter-Wallace Inc., Genzyme Corporation, Marlborough Chemicals Inc. and Nobel Chemicals Inc.

Verex Laboratories Inc., Englewood, Colo., has granted Cedona BV, a Dutch pharmaceutical company, the right to market "Verexamil" controlled-release tablets in Holland, Belgium and Luxemborg. "Verexamil" (verapamil) is a calcium channel blocker used for the treatment of high blood pressure and heart disease.